Glasgow
University Library

C139. -1949

Glasgow University Library

ALL ITEMS ARE ISSUED SUBJECT TO RECALL

GUL 96.18

THE UNIVERSITY OF CHICAGO
ORIENTAL INSTITUTE PUBLICATIONS

---

*Edited by*
JAMES HENRY BREASTED

RESEARCHES IN ANATOLIA—VOLUME I

# EXPLORATIONS IN CENTRAL ANATOLIA SEASON OF 1926

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

THE BAKER & TAYLOR COMPANY
NEW YORK

THE MACMILLAN COMPANY OF CANADA, LIMITED
TORONTO

THE CAMBRIDGE UNIVERSITY PRESS
LONDON

THE MARUZEN-KABUSHIKI-KAISHA
TOKYO, OSAKA, KYOTO, FUKUOKA, SENDAI

THE COMMERCIAL PRESS, LIMITED
SHANGHAI

THE UNIVERSITY OF CHICAGO
ORIENTAL INSTITUTE PUBLICATIONS
VOLUME V

RESEARCHES IN ANATOLIA—VOLUME I

# EXPLORATIONS IN CENTRAL ANATOLIA
# SEASON OF 1926

BY
H. H. VON DER OSTEN

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

COPYRIGHT 1929 BY THE UNIVERSITY OF CHICAGO
ALL RIGHTS RESERVED. PUBLISHED APRIL 1929

COMPOSED AND PRINTED BY THE UNIVERSITY OF CHICAGO PRESS
CHICAGO ILLINOIS, U.S.A.

WITHDRAWN
GLASGOW
UNIVERSITY
LIBRARY:

# PREFACE

Research among the remains of ancient Hittite civilization in Asia Minor was begun by the Oriental Institute in the summer of 1926 with a preliminary campaign of exploration under H. H. von der Osten. His efforts were devoted especially to the region within the great bend of the Halys River, called by the Turks the Küzül Irmak, a region which forms the heart of the ancient Hittite territory. The preliminary report on this first campaign was issued in 1927 under the title *Explorations in Hittite Asia Minor* (*Oriental Institute Communications*, No. 2).

The present volume is a fuller account of the preliminary survey in the basin of the Küzül Irmak. In the development of its researches in Asia Minor, the program of the Oriental Institute contemplates three successive stages: first, rapid preliminary explorations such as are reported in the present volume; second, a fuller and more detailed survey of the sites and monuments disclosed by the preliminary explorations; third, the excavation of such sites as the more detailed survey may disclose to be of special promise and importance. All three of these stages are now in full operation. A preliminary report carrying the work of all three stages to the end of the summer campaign of 1928 will appear as *Oriental Institute Communications*, No. 6, in the spring of 1929.

JAMES HENRY BREASTED

The Oriental Institute
University of Chicago
December 27, 1928

## AUTHOR'S NOTE

This publication seeks primarily to present a scientific record of source materials. The ancient monuments are fast disappearing. Whatever information is obtained in field work, whether in such preliminary explorations as those here recounted or in later, more intensive surveys, should be made available to all scholars.

Though the manuscript of this detailed report was prepared in 1926, the author's repeated absences in Anatolia have until now interfered with its actual appearance in print. The Index, thanks to this interval, includes various cross-references both to ancient place-names and to new names or spellings since substituted for designations current at the time these explorations took place. Upon later visits to many sites, the author has been amazed at the variations in usage.

The Turkish government has now in preparation an official list of geographic names transliterated into Latin characters. From this list such spellings as Ankara and Istanbul have been noted in the Index. But, since the list as a whole is not yet available, the author here, as in his preliminary report (*Oriental Institute Communications*, No. 2), follows the principles of the American Library Association. That is, spellings of Turkish place-names and of other words transliterated from Arabic script represent as simply as possible an approximation to the spoken sounds. Consonants are rendered by their simplest English equivalent, while vowels are used with their Italian or German values.

Since usage of the individuals concerned governs transliteration of personal names, less consistency is attainable in this latter group. Its problems affect also geographic names which contain personal names as elements. It should be mentioned especially that *dj* is favored by many writers to represent the English *j*-sound, and that this combination has been utilized even in geographic names in certain cases where *jj* (avoided throughout) would perhaps be more appropriate.

# TABLE OF CONTENTS


PAGE

List of Illustrations . . . . . xi

I. Introduction . . . . . 1

II. The Course of the Expedition . . . . . 7

III. Monographs: . . . . . 55

The Kepen *Hüyük* near Sivri Hissar . . . . . 55
The Phrygian Relief at Faharet Chesme . . . . . 59
The Ancient Settlement at Kirik Kaleh . . . . . 60
A Middle Kingdom Egyptian Contact with Asia Minor, by T. George Allen . 66
The Subterranean Temple in the Keskin Sivrissi . . . . . 68
The *Hüyüks* in the Delidje-Konak Su, Sarai Su, and Karajerli Su Valleys . . 77
Hüyük, Boghaz Köi, and Yazili Kaya . . . . . 98
A Cliff Tomb Near Osmanjik . . . . . 120
The *Kalehs* with Tunnels. . . . . 123
The *Hüyüks* South of Angora and on the Road from Köprü Köi to Kirshehir . 137
The Caves at Yarüm Kaleh, Kavass Maghara, and Tashan Kaleh . . . 149

IV. The Route as Registered in the Field Record, July 1 to September 25, 1926 . 155

Index and Glossary . . . . . 161

# LIST OF ILLUSTRATIONS

## PLATES


PLATE

I. Terzili Hammam

II. Amasia. Cliff Tombs

III. Amasia. Cliff Tombs

IV. Comana Pontica. The Monolith

V. A. Ancient Reliefs Built into a Modern Wall near Niksar
B. Faharet Chesme

VI. The Egyptian Statuette Found at Kirik Kaleh

VII. Hüyük. Lion with Phrygian Inscription

VIII. Kara Hissar. The Phrygian Altar

IX. Büyük Nefez Köi. Classical Sculpture

X. Yazili Kaya. The Sculptures. Figures 1–25

XI. Yazili Kaya. The Sculptures. Figures 1–15 and 9–25

XII. Yazili Kaya. The Sculptures. Figures 17–25 (with 1–10 at Left) and 26–34 (33–34 in Shadow)

XIII. Yazili Kaya. The Sculptures. Figures 35–38

XIV. Yazili Kaya. The Sculptures. Figures 39–41 (in A) and 42–47 with 51–56 (in B; 46–47 in Deep Shadow, 51–56 in Lighter Shadow)

XV. Yazili Kaya. The Sculptures. Figures 42–47

XVI. Yazili Kaya. The Sculptures. Figures 52–56 and 58–63

XVII. Yazili Kaya. The Sculptures. Figure 65

XVIII. Yazili Kaya. The Rift, with Figure 66 First in Its Setting, Then Separately

XIX. Yazili Kaya. The Sculptures. Figure 67 beside Rift; Figures 68–78 and Niches, as Seen in Looking Southward through Inner Court

XX. Yazili Kaya. The Sculptures. Figures 68–79

XXI. Yazili Kaya. The Sculptures. Figure 80

XXII. Yazili Kaya. The Sculptures. Figures 81–82

XXIII. A. Osmanjik. Peacock Relief
B. Amakzis. Lion Relief

XXIV. Giaur Kalessi. The Newly Discovered Relief


## MAP


PAGE

Map of Asia Minor, Showing Route of the Expedition . . . . *preceding* 7

## TEXT FIGURES


PAGE

1. The Kaleh of Boz Hüyük . . . . . 7
2. Sculpture in the Sawmill West of Boz Hüyük . . . . . 7
3. Osmanli Mosque at Boz Hüyük . . . . . 8
4. The Hüyük at Chukur Hissar . . . . . 9
5. The Inscription at Hamidiyeh . . . . . 10
6. The Plain near Mali Köi . . . . . 10
7. Ruined Columns near Faharet Chesme . . . . . 11
8. Angora and Its Setting . . . . . 11
9. Angora . . . . . 11
10. Angora. The Citadel . . . . . 12
11. Angora. Sculptures Brought from Hüyük near Aladja (cf. p. 98) . . . 13
12. The Plain in Which Lala Han Is Situated . . . . . 13
13. Azi Yozgad, a Typical Anatolian Village . . . . . 13
14. Classical Ruins near Azi Yozgad . . . . . 14
15. The Dry Bed of the Chukurjuk Su at Külüjlar . . . . . 14
16. The Hammam near Köhne. Ruins of a Late Classical Building . . . 15
17. The Chomak Dagh . . . . . 15
18. Terzili Hammam. Façade of the Roman Thermae . . . . . 16
19. Terzili Hammam. Interior . . . . . 16
20. Terzili Hammam. Detail of Architrave . . . . . 17
21. Yazili Tash. Relief Sculpture of Perhaps "Hittite" Origin . . . . 17
22. Kerkenes Dagh . . . . . 18
23. Ruined City Wall and Talus on the Kerkenes Dagh . . . . . 19
24. An Ancient Site on the Road from Yozgad to Aladja . . . . . 20
25. Altü Yapan . . . . . 20
26. Altü Yapan. Lion Built into a House Wall . . . . . 21
27. Altü Yapan. Stone Weight from a "Pontic" Oil Press . . . . . 21
28. Bogged on the Road to Boghaz Köi . . . . . 21
29. The Road near Sungurlu . . . . . 22
30. Landscape near Sungurlu . . . . . 22
31. View Westward from Kaleh Boinu . . . . . 22
32. Ancient Foundations at Kaleh Boinu . . . . . 23
33. Ancient Foundations at Kaleh Boinu . . . . . 23
34. Ancient Foundations at Kaleh Boinu . . . . . 24
35. Ancient Foundations at Kaleh Boinu . . . . . 24
36. Cherkess Köi . . . . . 25
37. Mountainside on the Way to Chorum . . . . . 26
38. Landscape along the Chorum Road . . . . . 27
39. The Hüyük near Sarai . . . . . 27
40. A Tumulus near Merzivan . . . . . 28
41. The New Railroad between Samsun and Amasia . . . . . 28
42. The Road to Samsun . . . . . 29
43. Serpentine Curves on the Road to Samsun . . . . . 29
44. Sketch Map of the Tumuli around Samsun . . . . . 30
45. Tumuli on the Dervent . . . . . 31

PAGE

46. Closer View of the Tumuli on the Dervent . . . . . 31
47. The Black Sea Shore from the Dervent . . . . . 32
48. Rock-Cut Rooms beneath the Small, Unfinished Tumulus on the Dervent . 33
49. The Dromedar ("Dromedary") Promontory with Its Tumuli . . . . . 34
50. The Two Tumuli near Karamut, from the Amasia Road . . . . . 34
51. One of the Karamut Tumuli . . . . . 35
52. Akalan . . . . . 35
53. Akalan. Among the Ruins . . . . . 36
54. An Ancient Settlement between Samsun and Akalan . . . . . 36
55. Details of the Burial Discovered by Railway Builders near Samsun . . 37
56. The Hodja Dagh . . . . . 37
57. Tower Ruins on the Hodja Dagh . . . . . 37
58. The Hüyük near Ladik . . . . . 38
59. Ladik . . . . . 38
60. Ladik. The Mosque . . . . . 39
61. Amasia Seen from a Cliff Tomb . . . . . 40
62. Comana Pontica . . . . . 41
63. Comana Pontica . . . . . 42
64. Comana Pontica. Monolith in Foreground . . . . . 42
65. Comana Pontica. Plans and Sections of the Tombs Cut in the Monolith . . 43
66. Niksar . . . . . 44
67. Niksar. The Citadel Wall . . . . . 44
68. A Large Tumulus near Pazard Köi . . . . . 45
69. Turkhal . . . . . 45
70. Han Öni . . . . . 46
71. Zileh . . . . . 46
72. A Camel Caravan near Aladja . . . . . 47
73. The Expedition at Imatli . . . . . 47
74. On Our Way in the Küzül Irmak Valley . . . . . 48
75. Angora. The Largest Tumulus . . . . . 48
76. Angora. Schematic Section of Largest Tumulus . . . . . 49
77. Angora. Actual Section in Largest Tumulus . . . . . 49
78. Angora. The Second Tumulus . . . . . 50
79. Üchayak . . . . . 51
80. Kül Tepe . . . . . 52
81. Nigdeh . . . . . 52
82. Nigdeh. A Tumulus . . . . . 53
83. Sivri Hissar . . . . . 55
84. Map of Sivri Hissar and Environs. Scale, 1:300,000 . . . . . 56
85. The Kepen Hüyük . . . . . 56
86. The Kepen Hüyük. Plan and Sections . . . . . 57
87. The Kepen Hüyük. Byzantine Building Fragment . . . . . 58
88. The Kepen Hüyük. Byzantine Building Fragment . . . . . 58
89. A Roman Site South of the Kepen Hüyük . . . . . 58
90. Situation of Faharet Chesme. Scale, 1:300,000 . . . . . 59
91. Situation of Kirik Kaleh. Scale, 1:400,000 . . . . . 60

PAGE

92. The Küzül Irmak near Yakhshi Han . . . . . 61
93. Kirik Kaleh . . . . . 61
94. Kirik Kaleh. Closer View . . . . . 62
95. Kirik Kaleh. Plan . . . . . 62
96. Kirik Kaleh. Remains of Ancient Wall . . . . . 63
97. Kirik Kaleh. Road Leading to an Ancient Gate . . . . . 63
98. Kirik Kaleh. A Modern Building Site Disclosing Fragments of Classical Architecture . . . . . 64
99. Kirik Kaleh. Bits of Ionic Columns . . . . . 64
100. Ancient Objects Found at Kirik Kaleh: Limestone Mold (in Center), Christian Tombstones (at Sides), etc. . . . . 65
101. The Inscription on the Egyptian Statuette Found at Kirik Kaleh . . . 66
102. Sacred Trees on the Way to Keskin Sivrissi . . . . . 68
103. Keskin Sivrissi . . . . . 69
104. Keskin Sivrissi. The Procession Road . . . . . 70
105. Keskin Sivrissi. Roadway Cut into the Rock . . . . . 70
106. Keskin Sivrissi. Road along the Mountainside . . . . . 71
107. Keskin Sivrissi. Entrance to Cave . . . . . 72
108. Keskin Sivrissi. Niche in Rock . . . . . 73
109. Keskin Sivrissi. Plan and Section of Cave . . . . . 74
110. Keskin Sivrissi. Plan and Section of Second Room of Cave . . . . 74
111. Ahali. Monolith Containing a Cave . . . . . 74
112. Ahali. Cave Entrance, Window, and Trough . . . . . 75
113. Ahali. Plan and Section of Cave . . . . . 76
114. Pines near Yozgad . . . . . 78
115. Aga Dede . . . . . 78
116. Aga Dede. Plan and Section . . . . . 79
117. The Hüyük near Kurgali . . . . . 80
118. Two Hüyüks near Kochakli . . . . . 80
119. The Aivalü Hüyük . . . . . 81
120. Mountains and Salt Steppes near Aivalü . . . . . 81
121. The Yozgad Road in the Delidje Su Valley . . . . . 82
122. Location of Hüyüks in Central Part of Delidje Su Valley. Scale, 1:800,000 83
123. The Hüyük North of Yerköi Station . . . . . 84
124. Roman Bridge Ruins near Yerköi . . . . . 84
125. Yozgad. The Mosque . . . . . 85
126. Caves near Sarai . . . . . 85
127. Uyuz Hammam . . . . . 86
128. Uyuz Hammam. Schematic Section . . . . . 86
129. Bulumashlü . . . . . 87
130. Bulumashlü. The Turkish Hammam . . . . . 87
131. Bulumashlü. The Embankment . . . . . 88
132. Bulumashlü. The Stone Eagle . . . . . 88
133. Bulumashlü. The Stone Eagle . . . . . 89
134. Bulumashlü. The Stone Eagle . . . . . 89
135. Hüyük Köi. Plan. Scale, 1:4,000 . . . . . 89

PAGE

136. The Hüyük Just West of Hadji Shefatli . . . . . 90
137. The Hüyük near Sari Ören . . . . . 90
138. Three Hüyüks near Dedik . . . . . 90
139. The Hüyük near Jamarli . . . . . 91
140. The Hüyük near Jamarli. Plan. Scale, 1:8,000 . . . . . 91
141. The Easternmost Hüyük near Dedik . . . . . 92
142. The Sivri near Alishar, Seen from the Terrace of the Alishar Hüyük . . 92
143. The Alishar Hüyük. Its Terrace Extends as Far as the Lines Marked . . 92
144. The Alishar Hüyük. Plan. Scale, 1:8,000 . . . . . 93
145. The Alishar Hüyük. Central Elevation, from Terrace . . . . . 93
146. The Temlik Hüyük . . . . . 94
147. Temlik. Plan of the Hüyük and Arena . . . . . 94
148. Temlik. Tumulus within the Arena . . . . . 94
149. The Kandlija Hüyük . . . . . 95
150. Pottery and Bracelet from a Burial in Kandlija Hüyük . . . . . 95
151. Hüyüks at Karafakeli . . . . . 96
152. The Hüyük near Düvel Köi . . . . . 96
153. Hüyük and Vicinity. Map. Scale, 1:300,000 . . . . . 99
154. Hüyük. General View . . . . . 100
155. Hüyük. The Sphinx Gateway . . . . . 101
156. Hüyük. The Sphinx Gateway . . . . . 102
157. Hüyük. The Fallen Sphinx . . . . . 103
158. Hüyük. Bas-Reliefs . . . . . 103
159. Hüyük. Bas-Relief . . . . . 104
160. Hüyük. Bas-Reliefs . . . . . 104
161. Hüyük. Bas-Relief . . . . . 105
162. Hüyük. Bas-Relief . . . . . 105
163. Kara Hissar . . . . . 106
164. Kara Hissar. The Slope . . . . . 107
165. Kara Hissar. Ruins at Foot . . . . . 108
166. Kara Hissar. The Line Points to Location of Phrygian Altar . . . . 109
167. Kara Hissar. The Phrygian Altar . . . . . 110
168. Kara Hissar. The Phrygian Altar . . . . . 110
169. Kara Hissar. The Phrygian Altar . . . . . 111
170. Kara Hissar. The Phrygian Altar. Sketch . . . . . 111
171. Tumuli near Hüyük. Kara Hissar at Right . . . . . 112
172. One of the Large Tumuli near Hüyük . . . . . 112
173. Boghaz Köi . . . . . 113
174. Ruins South of Boghaz Köi . . . . . 113
175. The Ancient Road South of Boghaz Köi. The Tufts of Vegetation in Foreground Are Peculiar to Ancient Ruins . . . . . 114
176. The Ancient Road Again . . . . . 114
177. Mountain Ridges Crossed by the Ancient Road . . . . . 115
178. Ruin Mounds (at Left and at Right) along the Ancient Road. The Road Itself Comes into View at the Right . . . . . 115
179. A Wrought Stone from beside the Ancient Road . . . . . 115

PAGE

180. Traces of Buildings along the Ancient Road near Tambassan . . . . 116
181. Traces of Buildings along the Ancient Road near Tambassan . . . . 116
182. One of Two Natural Hills near Büyük Nefez Köi . . . . . 117
183. The Other Natural Hill near Büyük Nefez Köi . . . . . 117
184. An Architrave Fragment near Altükara . . . . . 117
185. The Situation of Yazili Kaya (in Center) . . . . . 118
186. Yazili Kaya. General View . . . . . 118
187. Yazili Kaya. Plan . . . . . 119
188. Osmanjik . . . . . 120
189. Cliff Tomb near Osmanjik . . . . . 121
190. Cliff Tomb near Osmanjik. Plan and Section . . . . . 121
191. Defile South of Chorum . . . . . 123
192. The Kaleh South of Chorum (at Left in Fig. 191) . . . . . 124
193. The Kaleh South of Chorum. Ancient Wall Protecting Approach . . . 124
194. The Kaleh South of Chorum. The First Tunnel. Plan and Section . . 125
195. The Kaleh South of Chorum. Mouth of Shaft Leading to Second Tunnel . 125
196. The Kaleh South of Chorum. The Second Tunnel. Section and Plan . . 126
197. The Kaleh South of Chorum. The Third Tunnel. Entrance . . . . 126
198. The Kaleh South of Chorum. Platform on Summit . . . . . 126
199. Gökchali Kaleh . . . . . 127
200. Gökchali Kaleh. The Tunnels, with Section of First Tunnel . . . . 127
201. Gökchali Kaleh. Entrance to First Tunnel . . . . . 128
202. Gökchali Kaleh. The First Tunnel . . . . . 128
203. Gökchali Kaleh. Entrance to Second Tunnel . . . . . 129
204. Gökchali Kaleh. The Second Tunnel. Section and Plan . . . . . 129
205. Bairam Tepe. The Western Cliff . . . . . 130
206. Bairam Tepe. The Eastern Cliff . . . . . 131
207. Bairam Tepe. The Larger Tunnel. Section and Plan . . . . . 131
208. Bairam Tepe. Blocked Entrance to Smaller Tunnel . . . . . 132
209. Bairam Tepe. The Smaller Tunnel. Section and Plan. Below, General Plan of the Site . . . . . 133
210. Bairam Tepe. The Larger Cliff Tomb . . . . . 134
211. Bairam Tepe. The Larger Cliff Tomb. Plan and Section . . . . . 135
212. Bairam Tepe. The Smaller Cliff Tomb. Plans and Sections . . . . 136
213. The Amakzis Hüyük. Plan and Section . . . . . 137
214. Hüyük (near Chakal) . . . . . 138
215. Hüyük (near Chakal). Plan . . . . . 138
216. Large Tumulus near Hüyük . . . . . 139
217. Giaur Kalessi . . . . . 139
218. Giaur Kalessi. The Previously Known Reliefs . . . . . 140
219. Giaur Kalessi. Detail of Wall . . . . . 140
220. The Suyu Güzel Hüyük . . . . . 141
221. The Suyu Güzel Hüyük. Plan . . . . . 141
222. Sofular Hüyük . . . . . 142
223. Sofular Hüyük. Plan . . . . . 143
224. Shedid Hüyük . . . . . 144

PAGE

225. Köprü Köi. A Pseudo-Cyclopean Wall . . . . . 144
226. The Hüyük near Ghaman . . . . . 145
227. The Chugun Hüyük . . . . . 145
228. Kirshehir . . . . . 145
229. Sevdigin Hüyük . . . . . 146
230. Sevdigin Hüyük . . . . . 146
231. The Göl Hissar Hüyük . . . . . 146
232. Göl Hissar. A Tumulus . . . . . 147
233. Khas Hüyük . . . . . 147
234. Khas Hüyük. Plan and Section . . . . . 148
235. Yarüm Kaleh . . . . . 149
236. Yarüm Kaleh . . . . . 150
237. Kavass Maghara . . . . . 150
238. Kavass Maghara. Plans . . . . . 152
239. Kavass Maghara. Section, Looking Outward toward Face of Cliff . . . 152
240. Tashan Kaleh . . . . . 153
241. Tashan Kaleh. The Caves . . . . . 153
242. Tashan Kaleh. The Caves. Plan and Section . . . . . 154

# I

# INTRODUCTION

The purpose of the expedition sent to Asia Minor by the Oriental Institute of the University of Chicago in 1926 was to survey the central part of Anatolia, especially the territory within the great bend of the Küzül Irmak, the ancient Halys River, for archaeological remains dating from the great Hittite Empire. Apart from the ruins of Boghaz Köi and of Hüyük near Aladja, no site with "Hittite" remains was yet known in this region.[1] But since for at least five hundred years the center of Hittite power was hereabouts, it seemed very improbable that only two cities should have existed. Various scholars had traveled in this region, but most of them were especially interested in classical or post-classical remains.[2] Furthermore, their routes had been almost identical, so that vast territories were left archaeologically almost or wholly unknown. The few excavations on "Hittite" sites in Asia Minor, North Syria, and northern Mesopotamia had not shed satisfactory light on the Hittite question from the point of view of archaeology.

In contrast, important discoveries had resulted from historical and philological investigations. These showed that in the second millennium B.C. a great Hittite Empire in Asia Minor had controlled during its widest expansion a large part of North Syria and northern Mesopotamia and had been in close relations with the Egyptian pharaohs as well as with the kings of "Aḫḫijava" on the Greek mainland.[3] This empire had been destroyed about 1200 B.C. After the wreck of the Hittite Empire, there had appeared in the southeastern part of Asia Minor and in North Syria a number of "Hittite" city states which were

[1] Cf. *Boghasköi, die Bauwerke*, von O. Puchstein unter Mitwirkung von H. Kohl und D. Krencker (*Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft*, No. 19. Leipzig, 1912). A second volume, dealing with the pottery and small objects collected during the excavations there, is in preparation. On Hüyük, see Th. Macridy Bey, "La porte des sphinx à Euyuk," in *Mitteilungen der Vorderasiatisch-ägyptischen Gesellschaft*, XIII (1908), 177–205. The final publication of his excavations, which will furnish valuable material for further studies, will soon appear, as Macridy Bey told me in the summer of 1926 at Stambul. Cf. also E. Chantre, *Mission en Cappadoce* (Paris, 1898). In 1925 Dr. Götze discovered "Hittite" terra cottas on a *hüyük* near Yozgad, the exact position of which I do not know.

[2] Exceptions include the publications of Perrot and Guillaume, *Exploration archéologique de la Galatie et de la Bithynie* (Paris, 1872); of J. G. C. Anderson and F. and E. Cumont in *Studia Pontica*. 2 vols. (Bruxelles, 1903–6); and of E. Huntington in *Zeitschrift für Ethnologie*, XXXIII (1901), 204–9.

[3] Forrer, in *Mitteilungen der Deutschen Orient-Gesellschaft*, No. 63 (1924).

gradually absorbed by the Phrygians and Cimmerians in Asia Minor and by the Assyrians in North Syria.

Archaeological material was lacking for the Hittites of the Empire in Anatolia especially; and to survey Asia Minor for places where such material could be secured by excavation was the task of this expedition. A tentative route was chosen by taking into consideration the regions where natural conditions would suggest the existence of ancient settlements. I was fortunate enough to be able to consult on this matter Dr. E. Forrer, of the University of Berlin, whose studies on the historical geography of Asia Minor during the Hittite Empire are fundamental. This route had, of course, to be changed several times in its details, according to the presence or non-presence of roads or the information of natives concerning ancient sites.

Of cartographic material, the Kiepert map[1] is still the most convenient, even though it is not absolutely reliable in detail. The British General Staff map 1:250,000 for Anatolia is not very useful; the topographical map of Philippson[2] might also be improved in some respects. A good general survey is given by the German map 1:800,000[3] and the Turkish map 1:1,000,000 based on it. A British map 1:1,000,000 is based on the British General Staff map. The Turkish General Staff is now preparing a new Turkish map on a scale of 1:200,000. I have had the privilege of examining a few sections, and find it very reliable.

The ruins of pre-Greek settlements in Anatolia are of two main types. First should be mentioned walled cities such as Boghaz Köi and the city on the Kerkenes Dagh. Being normally situated on mountains and of relatively large dimensions, they do not form *tells*, or, as they are called in Asia Minor, *hüyüks*. Their surrounding walls are partly preserved, and remains of buildings may be recognized by small depressions or elevations or even by stone foundations.

More frequent are *hüyüks* or mounds, which constitute the second type. As in Mesopotamia the word *tell* proclaims an ancient ruin, so does *hüyük* in Asia Minor. Anatolian towns and villages are numerous in whose names this designation appears or which have only the word itself as a name.[4] Place names containing *kara* ("black"), *boz* ("gray"), *kül* ("ashes"), *yazili tash* or *yazili kaya* ("inscribed stone"), *hissar* or *kaleh* ("castle"), *tepe* ("artificial hillock"), or *ören* ("ruin") point usually to ancient remains near by.

[1] R. Kiepert, *Karte von Kleinasien*, 1:400,000 (new ed., Berlin, 1914).

[2] Philippson, *Topographische Karte von Kleinasien*, 1:300,000 (Gotha, 1910).

[3] *Übersichtskarte von Vorderasien*, herausgegeben von der Kgl. Preuss. Landesaufnahme.

[4] Cf. compounds such as Kara Hüyük and Boz Hüyük. Hüyük alone is the name of one village near Aladja and of another near Chakal.

Very seldom does the archaeologist find in Asia Minor other means of identifying the approximate period of an ancient settlement on a *hüyük* than the fragments of pottery covering its surface. Classical or post-classical settlements are of course exceptions, as such ruins are more likely to provide architectural fragments—architraves or columns, and even inscriptions—either on the spot itself or in nearby villages where the stones have been reused as foundations for houses or in the cemeteries. A *hüyük* itself is usually easily recognized by its regular form and by the gray color of its soil due to the ashes of the ancient settlement. On the summit of such a mound small elevations with depressions in their tops often result from decomposition of the *kerpich* or sun-dried bricks which were, as today, the commonest building material.[1] Stone was generally used only in foundations or for very important buildings. The kernel of such a *hüyük* may have been a small natural elevation or an artificially raised one. Around this center may have been grouped the dwellings of the inhabitants. On the elevation itself may have been a small stronghold or place of worship. By destruction and decomposition of the building material, a *hüyük* grew gradually in proportion to its population. On the surface of such a mound our expedition would find not seldom pottery fragments from Neolithic down to Byzantine or even Seljuk times, proving settlement during all these periods, sometimes of course with interruptions. This same genesis applies also for the larger settlements, where the "kernel" is usually marked by the acropolis. Situation of dwellings on natural terraces prevented, of course, the forming of a *hüyük*.[2] As already stated, remains of foundations or even fragments of wrought stones or sculptures are very seldom found on such pre-Greek mounds. So up to now mounds found and investigated during this expedition have been attributed to the "Hittite" period on the evidence of pottery fragments collected on their surfaces, if a reasonable percentage of "Hittite" specimens could be collected on them in comparison with fragments of other periods. Probably many sites on which only a little or no "Hittite" pottery at all has been found had also "Hittite" strata which are, on account of their age, very deeply imbedded.[3]

The weak point of this method of classification is the attribution of pottery to the "Hittite" civilization. In that respect systematic stratigraphic studies for Asia Minor are completely lacking. For "Hittite" settlements in North Syria

[1] Cf. the small *hüyük* near Kandlija (pp. 93–95), where we found evidences that already in very remote periods the dwellings were built of *kerpich*.

[2] Cf. Fig. 138.

[3] Cf. the *hüyük* near Kandlija (pp. 93–95). There, even though it was only a very small settlement, the earliest "Hittite" stratum, as found by our expedition, was seven meters under the present surface of the *hüyük*.

only one such study has been made, the results of which cannot be applied to Asia Minor.[1] For Asia Minor three types of pottery are generally accepted as "Hittite," since pieces and fragments of such have been found at Boghaz Köi, Hüyük near Aladja, and the well-known Kül Tepe northeast of Kaisariyeh.[2]

The first type shows a red, highly polished slip, in some cases decorated with black linear ornaments. This pottery has been found at Hüyük near Aladja, Boghaz Köi, and Kül Tepe, and has until now been considered typically "Hittite."

The second type of pottery, found in abundance at Kül Tepe and also at Boghaz Köi, shows spouts in the form of animals' heads, or decorated with little plastic figures of human beings and animals. Sometimes the vessels themselves are in the form of animals.

Painted ware constitutes the third type. Specimens of this kind have been found especially at Kül Tepe and Boghaz Köi. It appears in many guises, sometimes in very carefully worked clay, sometimes very crude, and formed either with or without the wheel. The ground retains usually the natural color of the clay (various shades of buff). The designs, mostly geometrical, are applied in black, dark and light brown, and red, rarely also in black and white on a red background. As already stated, more precise classification of this type is impossible on account of lack of data. As it was seemingly in use over a long period, much of this kind of pottery may have been made a long time after the rule of the Hittites in Asia Minor was broken. Some of it may even be dated nearly as late as the classical period. Collection of such material from different sites by scientifically conducted and executed excavations is of the utmost importance for further study of "Hittite" archaeology.

During the short stratigraphic investigation made by this expedition at the small *hüyük* near Kandlija it became evident that the pottery with the red polished slip is earlier than the painted ware, but that it was still in use for a certain time together with the latter.[3] Furthermore, it could be recognized that in the region of the Karajerli Su and the eastern part of the Delidje-Konak Su there was used, at the same time as the red-slipped pottery, a similar kind with a highly polished black slip. As far as I know, this has until now been the extent of our knowledge of "Hittite" pottery in Asia Minor.[4]

[1] C. L. Woolley, "Hittite Burial Customs," in the Liverpool *Annals of Archaeology and Anthropology*, VI (1914), 87–98.

[2] Cf. E. Chantre, *Mission en Cappadoce*. There is another, practically unknown site, likewise called Kül Tepe, west of Kaisariyeh.

[3] Cf. p. 95.

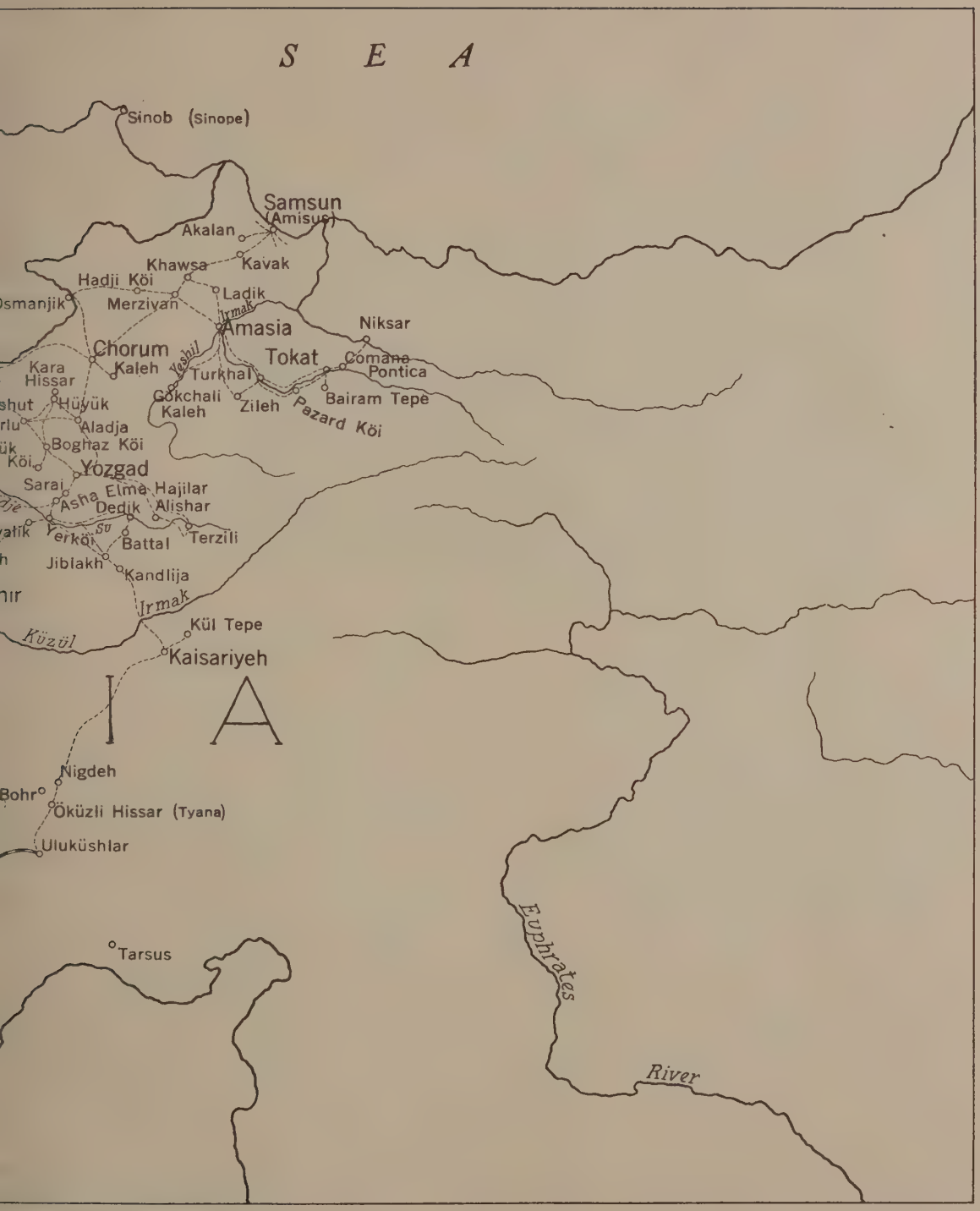
[4] Cf. E. Chantre, *op. cit.*; Ed. Meyer, *Reich und Kultur der Chetiter* (Berlin, 1914); *Records of the Past*, VII (1908), 175 and 310, and VIII (1909), 93–96.

The tendency of the new Turkish government and its officials to promote scientific research work and studies in Asia Minor helped very much toward the results of our investigations. The completion in the near future of railroad projects in Anatolia will facilitate further studies.[1] I am greatly indebted to His Excellency the Minister of the Interior, Djemil Bey, and to His Excellency the Minister of Public Instruction, Nedjati Bey, for their kind assistance in forwarding the work of the expedition; also to Halil Bey, the director-general of the museum in Stambul. I wish also to express here my sincerest thanks to Professor L. Moore and Professor M. Schede at Stambul, and to Mr. Margolis and Mr. Hirschbold at Samsun, for their kind assistance and advice in matters concerning technical phases of the journey.

The staff of the expedition was composed of Mrs. von der Osten, who was in charge of the technical work, and myself. For the first two months also an interpreter was taken with us (Shefket Hilmi Bey until we reached Samsun; then, from Samsun to Angora, Nedjmeddin Kadry Bey). During the last month we enjoyed for two weeks the company of Dr. E. Forrer and Professor Weigand. During the whole trip we had as our faithful chauffeur a young Turk, Hüssein.

[1] The Angora-Kaisariyeh line is nearly completed, as is also the Samsun-Sivas line as far as Amasia. A connection with the southern line, the Baghdad railroad, between Kaisariyeh and Uluküshlar is to be started in the near future.

MAP OF ASIA MINOR, SH




TE OF THE EXPEDITION

## II

## THE COURSE OF THE EXPEDITION

From Stambul, where we bought a Ford car and engaged the interpreter and the chauffeur, we sailed to Mudania, where the expedition really started. Our next stop was at Brussa, where we had to stay two days to obtain the neces-

FIG. 1.—THE KALEH OF BOZ HÜYÜK

sary permit to travel to Angora. In the museum at Brussa I saw a small basalt torso of a woman, said to come from Afiun Karahissar. The piece resembles in its style Egyptian statuettes of the Middle Kingdom. Unfortunately I was not allowed to take a picture of it. From Brussa we followed the road leading toward the Anatolian railroad, which we reached at Boz Hüyük. At Bazarjik on the way were many architectural fragments of late classical and Byzantine times. I was told that not far from this town, at places called Küzül Sarai and Sorgun Boyu, were large ruins from which these pieces had been brought.

FIG. 2.—SCULPTURE IN THE SAWMILL WEST OF BOZ HÜYÜK.

Boz Hüyük itself is situated at the base of a *kaleh* (Fig. 1). On its top are two basins, about 6 by 6 by 6 meters, cut in the living rock;[1] here and there on the slope are a number of rock-cut steps. Fragments of Byzantine pottery and of *terra sigillata* were collected, in addition to very archaic specimens of the black-on-yellowish-buff type. In the sawmill 500 meters west of the village I was shown a remarkable bit of sculpture: the bust of a man on whose mouth

FIG. 3.—OSMANLI MOSQUE AT BOZ HÜYÜK

lies a snake (Fig. 2). It is in a very dark cave under the factory, built into its foundation wall, so that it was impossible to make a close examination or accurate drawing. The sculpture is very similar to a piece published by Perrot.[2] Within Boz Hüyük itself are numerous architectural fragments, including capitals and a few altars, of late Roman and Byzantine times. The principal mosque of the town is a remarkable Osmanli building (Fig. 3).[3]

From Boz Hüyük we followed the railroad line to Eskishehir. Along the road we saw a few sites, small or larger ones, with ruins of late periods, especial-

[1] Cf. A. Koerte, "Kleinasiatische Studien," IV, in *Mitteilungen des kais. Deutschen Archäol. Instituts, Athenische Abteilung*, XXIV (1899).

[2] G. Perrot and Ch. Chipiez, *Histoire de l'art*, Vol. V (1890), Fig. 42.

[3] K. Humann and O. Puchstein, *Reisen in Kleinasien und Nordsyrien* (Berlin, 1890), p. 14.

ly near the small village of Porya, 32 kilometers northwest of Eskishehir. At Chukur Hissar is a large *hüyük* which I could not investigate (Fig. 4). Besides this I counted five *tumuli* along the road which follows the valley of the Pursak Su. Around Eskishehir are a few more *hüyüks* which I did not investigate, as this was not the actual territory in which we had planned to work. The next stop on our way to Angora was Sivri Hissar, the ancient Justinianopolis. Again we passed a number of Byzantine and Roman remains. In the cemetery of the village of Hamidiyeh was an inscription on a basalt slab about 1.20 meters long and .55 wide (Fig. 5). I do not know to what period it should be attributed. At Sivri Hissar we stopped for one day, as I had heard of a *hüyük* near it. The pottery we found there was similar to that found at Boghaz Köi.[1]

Fig. 4.—The Hüyük at Chukur Hissar

Continuing from Sivri Hissar, we followed northeastward the valley of the Pirlek Su, a tributary of the Pursak Su, as far as Mülk, whence we ascended the west slope of a dry, gently undulating plateau which extends to the broad valley of the Sakaria. We descended then into the Sakaria valley, crossing the river at Beli Köprü. Northward we could see in the plain a number of *tumuli*, probably belonging to those around Gordium, the ruins of which are situated 6 kilometers north of the bridge. The road then followed more or less closely the Anatolian railroad line through Polatli to a point 4 kilometers south of Mali Köi. There the road enters an arid plain (Fig. 6) which narrows gradually to a small valley leading northeastward toward the plain of Angora. In this valley are three springs. Near the middle one, called Fahareṭ Chesme, is a small ancient site with a few fragments of columns, one of which bears a badly worn Byzantine inscription (Fig. 7). Included among fragments of later periods re-used in the

[1] Cf. pp. 4 and 55.

FIG. 5.—THE INSCRIPTION AT HAMIDIYEH

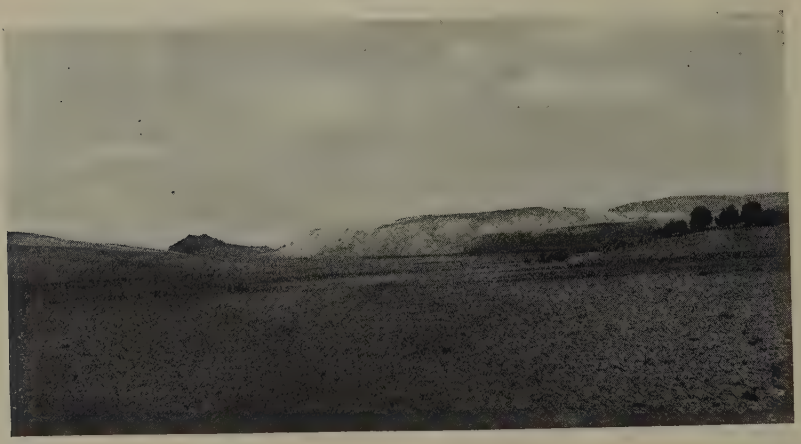


FIG. 6.—THE PLAIN NEAR MALI KÖI

FIG. 7.—RUINED COLUMNS NEAR FAHARET CHESME

FIG. 8.—ANGORA AND ITS SETTING

FIG. 9.—ANGORA

wall surrounding the spring is a remarkable Phrygian relief.[1] Shortly after passing the third spring, the valley opens toward the dry and hilly plain through which flows the Engürü Özü and on the northeast end of which is situated Angora (Figs. 8–11).

At Angora a few days were spent while getting our necessary permits for traveling and investigating in the eastern *vilayets*. These were granted to us very courteously, without any difficulties, as the new Turkish government

FIG. 10.—ANGORA. THE CITADEL

encourages all kinds of scientific research. From Angora we followed eastward the valley of the Tabakshaneh Su, along which runs the new railroad from Angora to Kaisariyeh. We passed a number of small *tumuli* and two small ruin sites before reaching Lala Han, situated in a small but fertile plain where are the remains of a large ancient settlement in a place dominating the whole valley (Fig. 12). There we left the valley and ascended a steep slope leading to a bare and very dry mountain chain, in a cleft of which is situated Azi Yozgad (Fig. 13). Not far from it lies an extensive classical site (Fig. 14), not identical, however,

[1] Cf. p. 59.

FIG. 11.—ANGORA. SCULPTURES BROUGHT FROM HÜYÜK NEAR ALADJA (CF. P. 98).

FIG. 12.—THE PLAIN IN WHICH LALA HAN IS SITUATED

FIG. 13.—AZI YOZGAD, A TYPICAL ANATOLIAN VILLAGE

with the one indicated near Sungur on Kiepert's map.[1] From these ruins the road descends to the deep valley of the Chukurjuk Su, whose dry bed it reaches

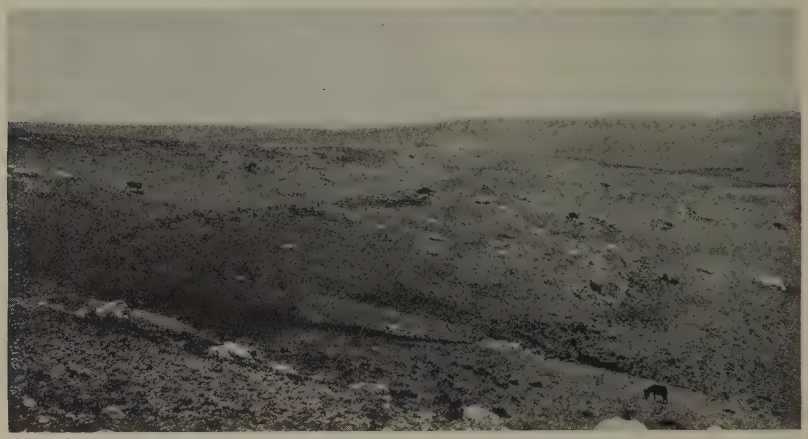


Fig. 14.—Classical Ruins near Azi Yozgad

Fig. 15.—The Dry Bed of the Chukurjuk Su at Külüjlar

at Külüjlar (Fig. 15). In dangerous curves the road then climbs the mountain chain between the Chukurjuk Su and the Küzül Irmak, to which river it next

[1] R. Kiepert, *Karte von Kleinasien*, Blatt Angora.

descends in still more thrilling curves. It reaches the Küzül Irmak near Yakhshi Han, where a bridge spans the river.

FIG. 16.—THE HAMMAM NEAR KÖHNE. RUINS OF A LATE CLASSICAL BUILDING

FIG. 17.—THE CHOMAK DAGH

From Yakhshi Han we went to Kirik Kaleh, the ancient Eccobriga, in the neighborhood of which we found a subterranean place of worship at the Keskin Sivrissi and a small cave near Ahali.[1] At Kirik Kaleh itself are the remains of

[1] Cf. pp. 68–76.

FIG. 18.—TERZILI HAMMAM. FAÇADE OF THE ROMAN THERMAE

FIG. 19.—TERZILI HAMMAM. INTERIOR

a large ancient settlement. On the day of our arrival an Egyptian statuette had been found there.[1] From Kirik Kaleh we followed the road leading south-

FIG. 20.—TERZILI HAMMAM. DETAIL OF ARCHITRAVE

ward to Keskin. Then we turned almost straight eastward across a rather arid plateau cut from northwest to southeast by a few fertile valleys, in two of which I observed *hüyüks*, until we reached the post road from Angora to Köprü Köi and Yozgad. After passing the Kalüg Özü, a short detour brought us to Aivalü, near which is a *hüyük* already discovered by Chantre.[2] From there we followed the main road, which leads through dry steppes, partly real salt steppes, until we reached the broad valley of the Delidje Su. We crossed the river at Sekili Köprü. Near the bridge are the remains of a large *han*, probably Seljuk. This valley gradually widens until it becomes, near Yerköi, a large plain. The valley is bordered on both sides by gently sloping mountains,

FIG. 21.—YAZILI TASH. RELIEF SCULPTURE OF PERHAPS "HITTITE" ORIGIN.

[1] Cf. pp. 64–67.

[2] E. Chantre, *Mission en Cappadoce.*

those on the north being divided by a number of valleys running from north to south. The largest of these, in which flows the Sarai Su, we followed upstream to Yozgad.

Along this river, and especially around Yerköi, are situated a number of ancient settlements. We investigated some of them at this time from Yozgad, others from Yerköi[1] during the third part of the expedition. One excursion from Yozgad brought us to Terzili Hammam, a little south of the valley of the Konak Su, as the upper reaches of the Delidje Su are called. The road leads first northeastward to Chalatli, where it turns to the east and follows the valley of the Egri Özü. Slightly upstream from a southward bend of the river lies

Fig. 22.—Kerkenes Dagh

Köhne, near which is situated a *hammam* with classical remains (Fig. 16). We then followed the east bank of the river, passing Churuk Köi, Imrahor, and Bahatlin, near which three villages are remains of late classical settlements of varying size. Near Bahatlin also are some large *tumuli*. By a road leading southward along the west slope of the gently undulating Chomak Dagh (Fig. 17) we reached Terzili in the Konak Su valley. From there a mountain path leads to the *hammam*, the remarkable remains of Roman *thermae*[2] (Plate I and Figs. 18–20).

We returned to Yozgad the next day by another road, a little south of the one on which we had come. It brought us past the imposing mountain of the *sivri* near Alishar. Near that village, too, we found a large *hüyük*, and close by it a number of *tumuli*.[3] We crossed the Egri Özü near Yazili Tash, a village in which a number of architectural fragments and sculptures occur, among them

[1] Cf. pp. 77–84.

[2] E. Chantre, *Mission en Cappadoce*, p. 118.

[3] Cf. p. 89.

FIG. 23.—RUINED CITY WALL AND TALUS ON THE KERKENES DAGH

architraves of late Roman times and a bit of relief which may be "Hittite" (Fig. 21). At Shakh Muratli we reached the southern slope of the Kerkenes Dagh, on the summit of which are the remains of a large ancient city (Fig. 22).[1] This site was so vast and the interval before sunset so brief that we abandoned

Fig. 24.—An Ancient Site on the Road from Yozgad to Aladja

any thought of even a sketchy survey, promising ourselves that we would return the following year. The magnitude of the city wall and its talus can be imagined by comparing its size with that of the stooping man almost invisible in the center of Figure 23. Having passed this mountain range, our road led

Fig. 25.—Altü Yapan

northward toward the Egri Özü valley, which we reached north of Balali, and on through Chalatli back to Yozgad. Not far from Balali, south of the Egri Özü, we observed a large *hüyük* similar in form to the one near Alishar.

Our next aim was to reach Boghaz Köi. From Yozgad we retraced our route to Chalatli, from which a path rather than a road leads over the mountains to the valley of the Arabsefer Su. Around Aladja this forms a broad, fertile plain

[1] Cf. *Studia Pontica*, I, 25–29.

belonging already to the Yeshil Irmak basin. Near the watershed of this mountain range we passed the remains of an ancient settlement with pottery fragments of various periods (Fig. 24). In the valley of the Arabsefer Su are remains of various classical or post-classical settle-

Fig. 26.—Altü Yapan. Lion Built into a House Wall.

Fig. 27.—Altü Yapan. Stone Weight from a "Pontic" Oil Press.

Fig. 28.—Bogged on the Road to Boghaz Köi

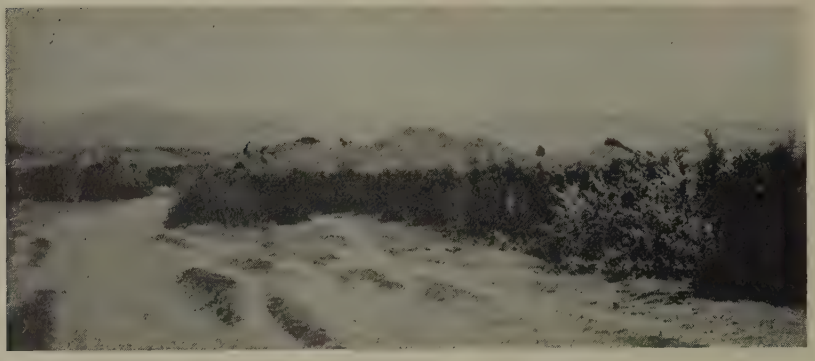


FIG. 29.—THE ROAD NEAR SUNGURLU

FIG. 30.—LANDSCAPE NEAR SUNGURLU

FIG. 31.—VIEW WESTWARD FROM KALEH BOINU

ments. Aladja itself contains a great number of sculptured architectural fragments. From Aladja we followed a road leading westward to Altü Yapan, a little village built on a *hüyük* (Fig. 25). In the foundation wall of one of the houses a stone lion (probably "Hittite") has been re-used (Fig. 26).[1] As

FIG. 32.—ANCIENT FOUNDATIONS AT KALEH BOINU

FIG. 33.—ANCIENT FOUNDATIONS AT KALEH BOINU

in all other villages in this neighborhood, there is here also a weight from a "Pontic" oil press (Fig. 27).[2] Following a dry river bed leading northward, we reached Hüyük, famous for its two gateway sphinxes and its "Hittite" reliefs.[3] From there we made a short excursion to the Kara Hissar, also called Kaleh

[1] Cf. J. Garstang in the Liverpool *Annals of Archaeology and Anthropology*, I (1908), 9.

[2] Cf. *Studia Pontica*, I, 15. [3] Cf. p. 98.

Hissar, a mountain of volcanic origin in a narrow valley about 9 kilometers north of Hüyük. As this mountain and various *tumuli* around Hüyük seemed

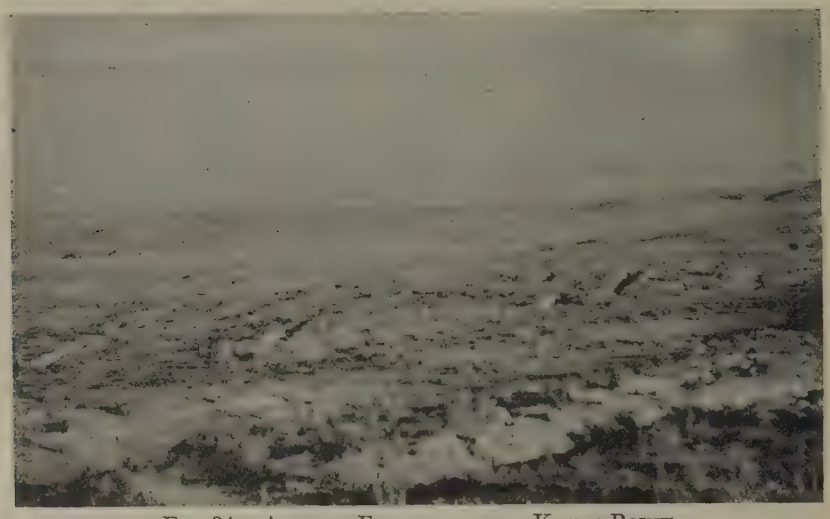


FIG. 34.—ANCIENT FOUNDATIONS AT KALEH BOINU

FIG. 35.—ANCIENT FOUNDATIONS AT KALEH BOINU

very interesting, I decided to come back later to investigate more at leisure. We did so on our way back from Samsun.[1]

[1] Cf. pp. 98–101.

From Hüyük we then continued to Boghaz Köi. It was one of the most difficult parts of our whole journey, as the valley which we had to follow was very marshy and it was very hard to keep our car from getting mired (Fig. 28). Finally, late in the afternoon, we reached Boghaz Köi, where we were received in the home of Zia Bey with his well-known courtesy and hospitality. We stayed four days in Boghaz Köi, as I wanted to study the famous ruins and photograph parts of the rock sanctuary of Yazili Kaya. The last day before continuing northward I made an excursion on horseback along an ancient road[1] to Büyük Nefez Köi.

Fig. 36.—Cherkess Köi

For the first part of our journey northward we had to follow again the marshy "road" along the Budak Özü Chai as far as Sungurlu. Near this town the whole valley is nothing but an immense garden with clumps of beautiful old trees. From Sungurlu our road bent slowly northward toward a dry and undulating high plateau with occasional very high mountains with rocky summits (Figs. 29 and 30). At Kaushut we crossed the broad dry bed of a tributary of the Delidje Su and then went ahead northward without any road, through a dry mountainous region where we had often to push our car uphill, until we reached Kaleh Boinu.

Kaleh Boinu is situated on the high plateau not far from the point where the Delidje Su joins the Küzül Irmak. Two rocky mountains rise like forts out of the general slope of the chain, and one has a magnificent view of the union

[1] Cf. pp. 102–9.

of the two rivers and far to the west beyond the Küzül Irmak (Fig. 31). The whole region is dry, and the steppes around the two rivers in the broad valleys are rich in salt exudations. On one of the two isolated mountains, and especially on the terrace connecting them with the plateau, are many remains of ancient foundations (Figs. 32–35). Unfortunately, the natives are digging them out for building material. Besides many pottery fragments of Roman and Byzantine times and a few Seljuk coins, we collected also a reasonable percentage of older

Fig. 37.—Mountainside on the Way to Chorum

pottery fragments, especially of the kind with the highly polished red slip, together with some of the painted type. There is no doubt, considering the dominating strategical position, that a settlement has existed here continuously. A short excursion brought us to the junction point of the two rivers themselves near the small village of Kula. The Küzül Irmak valley is fairly wide here, but covered only with the dry, grayish steppe grass. It opens gradually toward the northeast. Proceeding on our way, we reached the valley again, descending the next day from the high plateau. Other than two small *tumuli* on the west slope of the plateau we saw here no remains of ancient times. The few modern villages are rather poor and small, mostly inhabited by Cherkess (Fig. 36). Near Ambarjik we reached the main road from Iskelib to Chorum and followed it eastward. The valleys became more fertile and the mountains appeared now partly covered with shrubs. Occasionally small groups of real

trees appeared also (Figs. 37 and 38). Chorum is situated at the northeast corner of a broad, fertile valley around the Chorum Chai, a tributary of the Yeshil Irmak.

FIG. 38.—LANDSCAPE ALONG THE CHORUM ROAD

FIG. 39.—THE HÜYÜK NEAR SARAI

In the valley of this river, southeast of Chorum, we found a large *hüyük* (Fig. 39) near Sarai, which village is filled with remains of Roman and Byzantine times. On the *hüyük* we found red-slipped and painted pottery fragments. A little farther, where the valley narrows and two detached rocks form a natural

gateway, we encountered the first of those fortresses with tunnels of which we later saw several more.[1]

From Chorum we proceeded northward toward Osmanjik, where stand the imposing remains of an ancient fortress and where we saw also a cliff tomb.[2] At the northeast corner of the fertile plain around Osmanjik the road enters a narrow but fertile valley which gradually tapers to a real gorge with rock walls dropping nearly vertically; it opens again gradually into the broad plain of Merzivan. In this plain rise, seemingly dispersed irregularly, large but flat *tumuli* (Fig. 40). Beginning at its west end and forming a chain eastward, they seem to be a system of military posts. Proceeding northeast, we reached the famous Amasia road which leads northward to Samsun and along which the

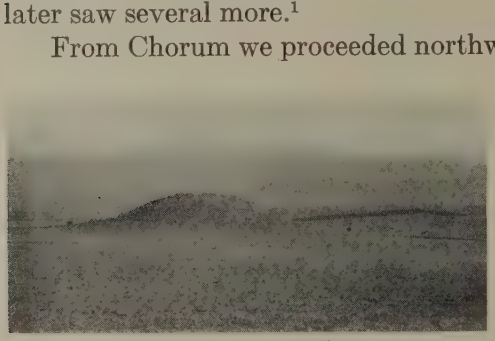


FIG. 40.—A TUMULUS NEAR MERZIVAN

FIG. 41.—THE NEW RAILROAD BETWEEN SAMSUN AND AMASIA

new railroad from Samsun to Sivas is now being built (Fig. 41). At Khawsa, the Anatolian Vichy, are many remains of the late classical period, such as sculptured architraves and small altars. At Kavak a large *hüyük*, the kernel of

[1] Cf. p. 123. [2] Cf. pp. 120–22.

which had been a natural rocky elevation, proved that an ancient settlement had been located there. The whole route is beautifully scenic (Figs. 42 and 43), especially the view of the Black Sea, which one sees first between the two large *tumuli* near Karamut, and then the descent toward the fertile plain on the border of which lies Samsun on the slope of the Kara Samsun.

FIG. 42.—THE ROAD TO SAMSUN

Famous for its situation near the site of the ancient Amisus, Samsun is likewise famous for the *tumuli* in its vicinity. During the ten days we were there, I visited not less than twenty-one of them (Fig. 44). These *tumuli* appear usually in groups. The first is situated east of the city, on the Dervent (Figs. 45–47). One of these *tumuli*, although the smallest, is especially interesting, as it has been opened and the excavator has cleared the entrance to a number of rock-cut rooms beneath it (Fig. 48). Northwest of Kara Samsun are three other imposing groups of *tumuli*, one near the site of the classical cemetery, one on a promontory called "the Dromedary" (Fig. 49), and one on the Palach, a broad mountain range sloping gently down toward the Black Sea. The landmarks of Samsun are two very large *tumuli* situated on a flat mountain a little north of the small village of Karamut, not far from Samsun. These two *tumuli*, surely royal tombs, are to be seen from the south by one approaching along the Amasia road (Figs. 50 and 51). There seems no doubt that all these *tumuli*

FIG. 43.—SERPENTINE CURVES ON THE ROAD TO SAMSUN.

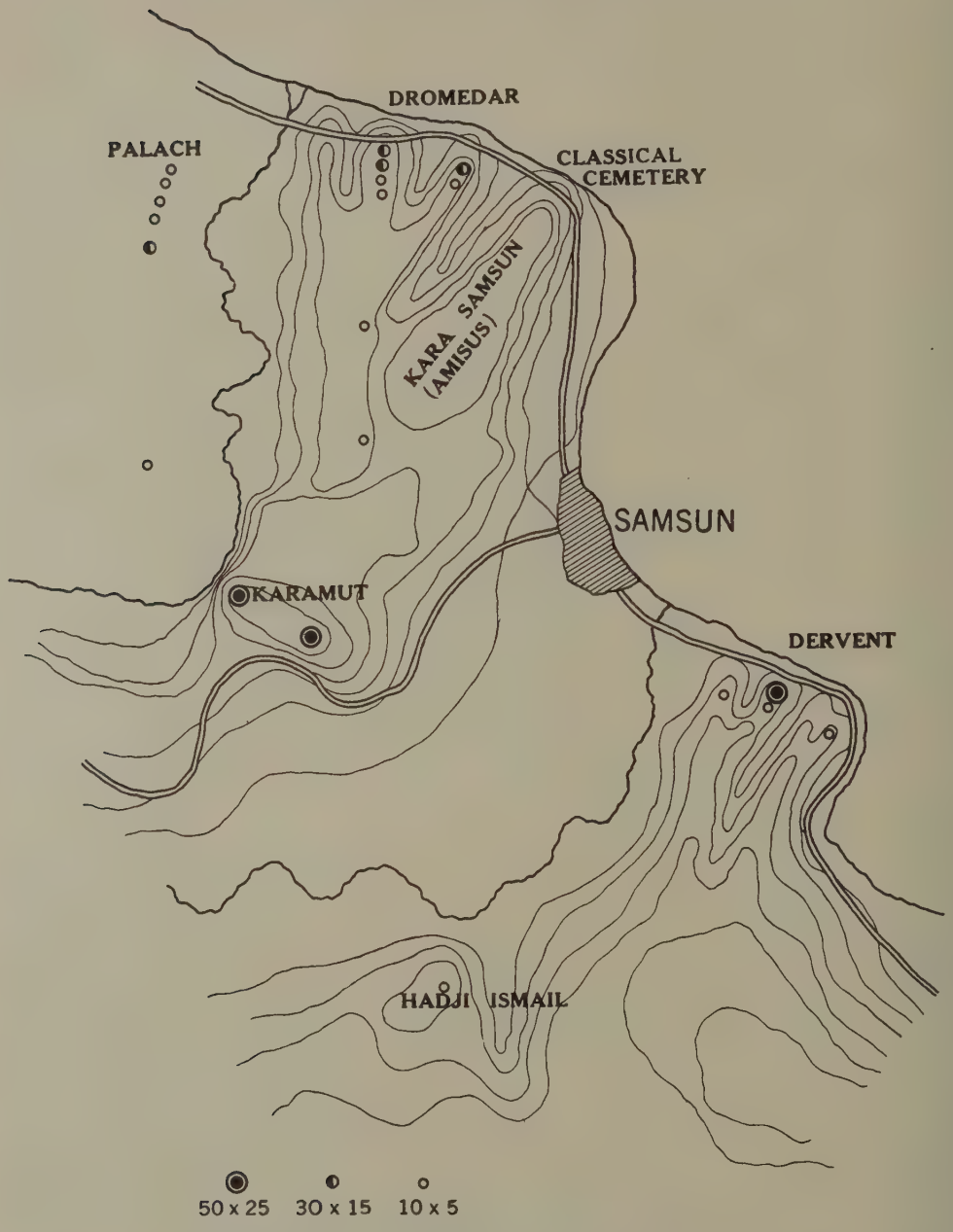



Fig. 44.—Sketch Map of the Tumuli around Samsun

were primarily burial mounds; but at least a part of them might have been used secondarily as beacons for ships trying to enter the Bay of Samsun.[1]

Not far from Samsun, about 16 kilometers southward, an ancient citadel is

FIG. 45.—TUMULI ON THE DERVENT

situated near the village of Akalan. This place has been partially excavated by Th. Macridy Bey.[2] It is a very interesting stronghold (Figs. 52 and 53), resembling closely the one at Tiryns. The whole surface of the citadel is covered

FIG. 46.—CLOSER VIEW OF THE TUMULI ON THE DERVENT

with painted pottery of archaic type; pottery with a red slip prevails. It would be of great importance to have this place excavated systematically, as I feel sure that much could be found here which would shed light on relations of the

[1] Cf. *Studia Pontica*, II, 112.

[2] Th. Macridy Bey, "Une citadelle archaïque du Pont," in *Mitteilungen der Vorderasiatisch-ägyptischen Gesellschaft*, XII (1907), 167–75, with 17 plates.

Hittite Empire with the Mycenaean and Aegean cultures. Six kilometers from Akalan on our way back to Samsun I observed another ancient site (Fig. 54).

During our stay at Samsun a rather late burial had been found in the course of the work on the railroad. It consisted of a small niche cut in the rocky mountain slope, then closed by a few large stones and covered with earth. Inside were three pottery coffins. Unfortunately the workmen, imagining treasures to be hidden in them, had broken them to bits and scattered the bones of the skeletons and the other objects inside of the coffins all about, so that on my visit I found only two small vases of terra cotta and the remains of two or three

FIG. 47.—THE BLACK SEA SHORE FROM THE DERVENT

bronze objects. The coffins had been of an elongated oval shape with a rectangular opening at the top near one end. Over this opening lay a rectangular pottery lid, and near the edge of the opening were protuberances on both coffin and lid. Around these protuberances had been put cords or bands to lace the opening shut. These bands were joined by means of buckles, of which I was able to find two or three (Fig. 55).

Northwest of Samsun is the large mountain complex of the Hodja Dagh (Fig. 56). I had been told in Samsun that around the whole Hodja Dagh, about halfway up the slope, were dispersed fortifications showing walls very similar to these at Akalan. A careful investigation of the summit and the whole northeastern and eastern slopes showed that these "walls" were nothing but strata of a harder limestone, 1.50 to 2 meters thick, cropping vertically out from the soil and running as far as 500 meters in a straight line. Wind and weather and especially frost had cracked this limestone, giving the impression of a cyclopean wall. Only on the northwestern end of the summit did this natural cyclopean wall seem to have been used as part of a huge tower (Fig. 57).

From Samsun we followed back as far as Khawsa the Amasia road on which we had come. From Khawsa we turned eastward, searching our way as well as possible through the very tall mountains until we reached the broad and fertile

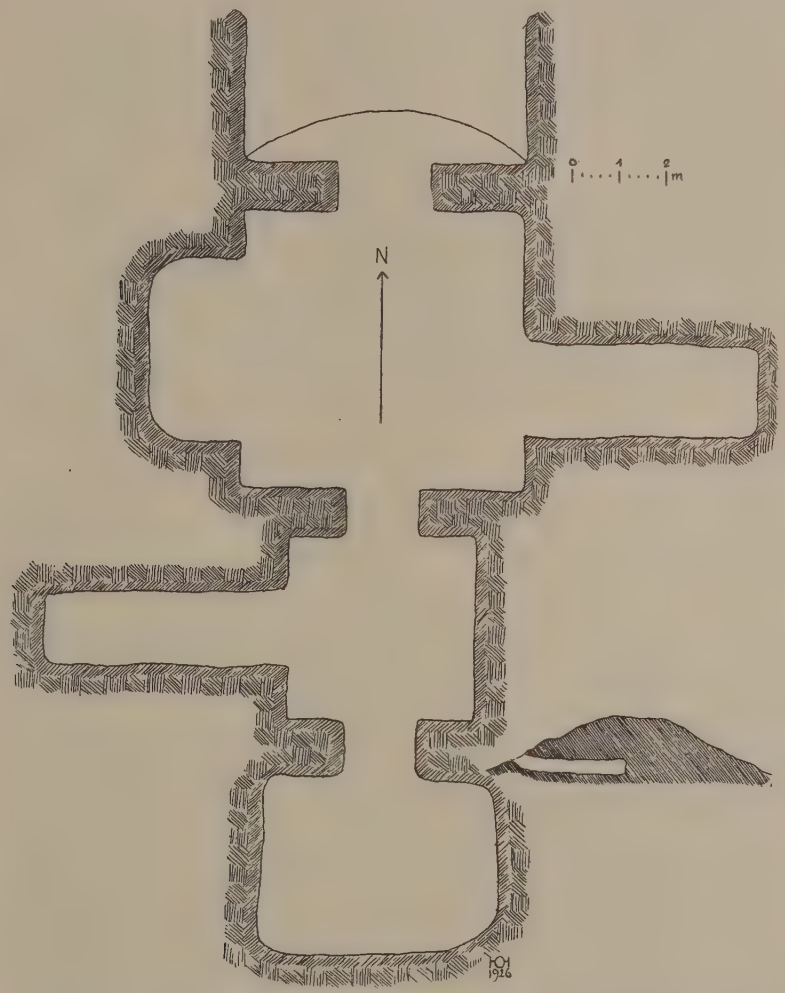



Fig. 48.—Rock-Cut Rooms beneath the Small, Unfinished Tumulus on the Dervent.

plain on the southern end of which Ladik is situated. On one of the mountains, near the only place from which a road could enter this plain from the west, I noticed a *tumulus*. Not far from the modern town of Ladik is situated an ancient mound (Fig. 58). Ladik itself is full of remains of late Roman and Byzan-

tine times, and in addition there is a very fine old mosque (Figs. 59 and 60). From Ladik we proceeded on the ancient road toward Amasia. Scenically, this was one of the most beautiful parts of our journey; but the road, very little

FIG. 49.—THE DROMEDAR ("DROMEDARY") PROMONTORY WITH ITS TUMULI.

used, is in a deplorable condition. Finally, descending to the valley of the Yeshil Irmak, we reached Amasia. As Amasia has been fairly well investigated archaeologically,[1] I did not stay there long; but it would still be worth while

FIG. 50.—THE TWO TUMULI NEAR KARAMUT, FROM THE AMASIA ROAD

to make a systematic survey of the many cliff tombs which cover, besides its *hissar*, the mountains surrounding this remarkable city (Plates II and III and Fig. 61).

[1] Cf. *Studia Pontica*, II, 146–71.

From Amasia we followed the post road to Tokat. As far as Turkhal no features of archaeological interest appeared. Turkhal itself I investigated on our way back from Tokat.[1] Tokat, on the Yeshil Irmak, is in its topographical situation very similar to Amasia. There, too, the town lies at the foot of a huge rock on whose top is an invincible castle. From Tokat we made an excursion to Bairam Tepe, a rock *kaleh* with tunnels like the one near Chorum.[2] Another excursion brought us to the famous site of Comana Pontica (Figs. 62 and 63),[3] near which we found a second settlement on the other side of the river. Not far from the mound is a huge monolith with two tombs cut in it (Plate IV and Figs. 64 and 65).

FIG. 51.—ONE OF THE KARAMUT TUMULI

FIG. 52.—AKALAN

[1] Cf. pp. 38–39. [2] Cf. pp. 126–28. [3] Cf. *Studia Pontica*, I, 63–67, and II, 248–54.

On a third excursion from Tokat we visited Niksar (Fig. 66).[1] The citadel here also had a tunnel, which seems now to have vanished completely. In the outer wall of the citadel four different methods of wall-building can be seen, one

FIG. 53.—AKALAN. AMONG THE RUINS

FIG. 54.—AN ANCIENT SETTLEMENT BETWEEN SAMSUN AND AKALAN

above another. After the destruction of the first wall, of polygonal stones carefully put together, it had been repaired with roundish stones arranged in rows. On this stratum is superimposed a third, showing more or less rectangular ones; and this again is surmounted finally by a wall constructed in the late classical style, its stones bound with mortar (Fig. 67). At the north end of

[1] Cf. *Studia Pontica*, II, 259–70.

the bridge crossing the Germili Su is a bit of modern wall on which are used as decoration two small ancient reliefs showing winged animals with tails ending in animal heads (Plate VA). A similar piece, but with human figures, F. Cumont found at Niksar in the citadel itself.[1] In the portal of a beautiful

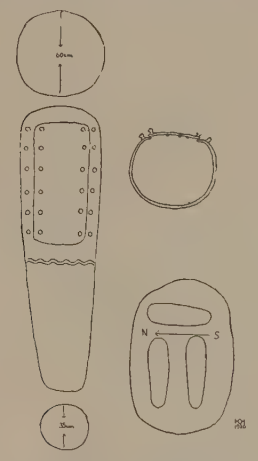



FIG. 55.—DETAILS OF THE BURIAL DISCOVERED BY RAILWAY BUILDERS NEAR SAMSUN.

FIG. 56.—THE HODJA DAGH

FIG. 57.—TOWER RUINS ON THE HODJA DAGH

Seljuk *türbeh* at the entrance to the city a stone slab with a crouching antelope in bas-relief is inserted as centerpiece under the stalactite ornament. This relief shows the same technique as the two animal reliefs in Plate VA and the one found by Cumont.

[1] *Studia Pontica*, II, 269.

From Tokat we followed the valley of the Yeshil Irmak, this time on its south bank, back westward to Turkhal. Not far from Pazard Köi we saw the remains of a Seljuk *ulu han*. A little farther we passed a very large *tumulus*

FIG. 58.—THE HÜYÜK NEAR LADIK

FIG. 59.—LADIK

(Fig. 68) which belongs to a group of five distributed in a straight line across the whole width of the valley. From there we proceeded 10 kilometers farther on the south bank. Then, crossing the river, we reached the main road from Turkhal to Tokat.

Turkhal is situated in a pocket surrounded by high mountains; toward it lead five tributary valleys (Fig. 69). In the center of this pocket towers a high rock on which is situated the castle. This shows especially Byzantine remains, but also a large tunnel.[1] About 3 kilometers north of Turkhal, not far from the

Fig. 60.—Ladik. The Mosque

road to Amasia, we found the remains of a rather large classical settlement with many very well preserved foundations. This spot is called by the natives Han Öni (Fig. 70).

At the foot of the valley through which the road leads southwest toward Zileh we found on an isolated rock on the mountain slope the site of a small early Christian chapel. In a narrow crevice with vertical walls were the badly

[1] Cf. pp. 128 and 130.

weathered remains of a Greek inscription and of four incised crosses. Over this inscription, at a height of about 2.50 meters above the ground, were a number of rectangular holes corresponding in position on both sides of the crevice. They were probably made to hold timbers in order to support a wooden roof. Scattered all over the ground around this rock are fragments of pottery, but I could not find a single one of a definite type.

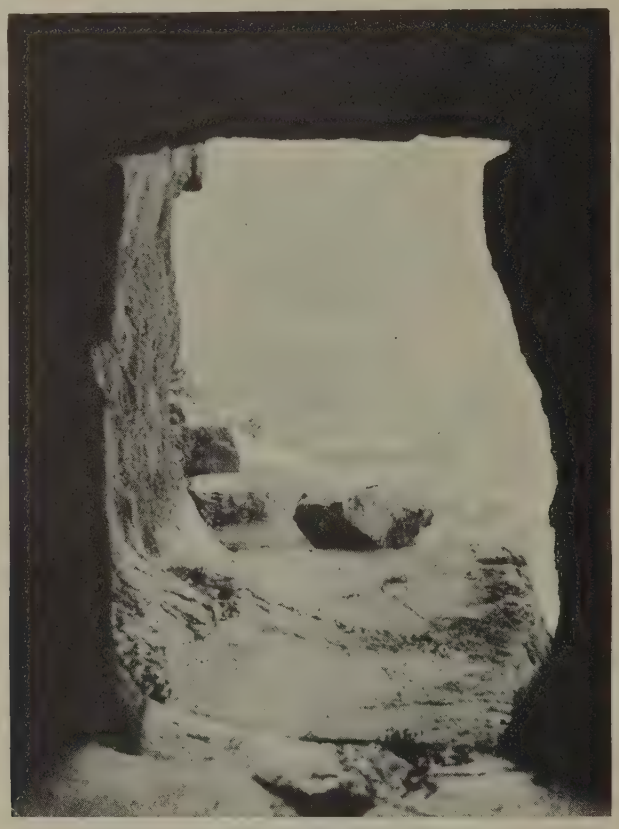


Fig. 61.—Amasia Seen from a Cliff Tomb

Proceeding on our route, we reached Zileh (Fig. 71), in its situation very similar to Turkhal. There, too, was a large citadel mound bearing the remains of an ancient castle with a tunnel. A rather badly preserved road led then northwestward to the mountain plateau which we had to cross on our way back to Amasia. Leaving the highland, we descended the mountain on a road sloping rapidly down into the valley of Amasia. From Amasia we made an excursion to Gönnenjik, where I found a fortress with three tunnels of the same type as

at Amasia and Tokat.[1] On our way back from Gönnenjik to Amasia we investigated a large *hüyük* near Olas and also a rock tomb not far away from it.

From Amasia our road led to the northwest until we reached the wide plain on the northern border of which Merzivan is situated. Again I had occasion to observe the military situation of the *tumuli* which I had already noticed as we came from Osmanjik (cf. Fig. 40). At Merzivan we turned southwest, following a valley which pierces the mountains bounding the plain of Merzivan to the south. Through a steep gorge the road ascends to Chorum. Proceeding from Chorum, we went straight southward to Aladja, then westward to Hüyük,

Fig. 62.—Comana Pontica

following approximately the same road we had followed a month before. During the two days' stay at Hüyük I investigated the Kara Hissar and the nearby *tumuli*.[2]

From Hüyük we proceeded northwestward along a creek until we reached the watershed. We then turned southwest, following another small stream which joined the Budak Özü Chai 10 kilometers east of Sungurlu. Twelve kilometers southwest of Hüyük we saw the remains of an ancient settlement not far from the small village of Tuvush. Near Sungurlu we struck the road leading from there to Boghaz Köi, and followed it into Sungurlu. Thence we made our way northwestward, following first about the same course we had taken a month before in traveling to Kaleh Boinu. As before, we crossed at Kaushut a large tributary of the Delidje Su and proceeded until we reached the Küzül Irmak. The region between the Delidje Su and the Küzül Irmak is a very dry plateau, partly gently undulating and partly showing medium-sized rocky mountain ridges. We tried near Imatli to cross the Küzül Irmak with our car in order to reach Changri; but neither that evening nor the whole next

[1] Cf. pp. 124–26. [2] Cf. pp. 98–101.

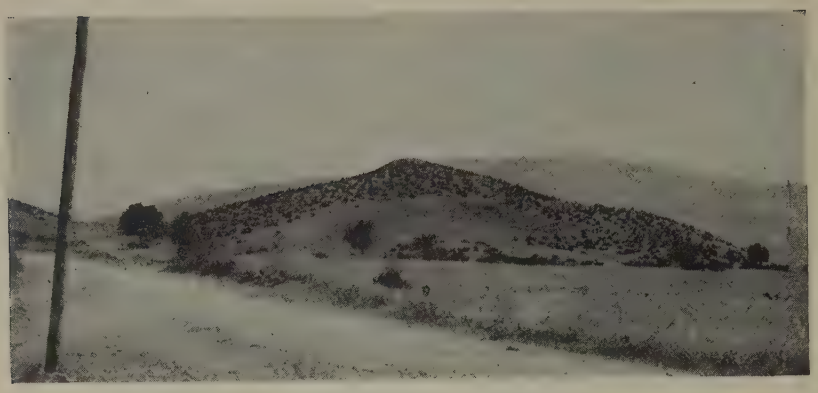


FIG. 63.—COMANA PONTICA

FIG. 64.—COMANA PONTICA. MONOLITH IN FOREGROUND

day could we manage to do so, although we followed the Küzül Irmak valley up and down for about 40 kilometers (Figs. 73 and 74).

In contrast to the high mountains which form the west bank of the river in this region, the east bank consists of a relatively broad and fertile plain. The whole day we did not see any ancient remains except a few column shafts in Turkish cemeteries. Finally I decided to push southward toward Yakhshi Han, where I knew of a bridge over the Küzül Irmak. No road existed; so we found

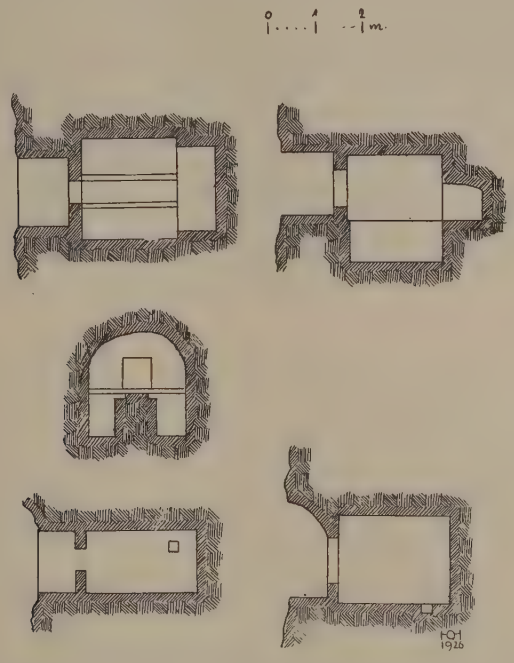


Fig. 65.—Comana Pontica. Plans and Sections of the Tombs Cut in the Monolith

our way with the aid of the compass in a general southerly direction until we saw the Keskin Sivrissi. We then used it as a landmark, since I knew its position relative to Kirik Kaleh near Yakhshi Han. We finally struck the track of the new Angora-Kaisariyeh railroad and simply followed it to Kirik Kaleh, where we were received very hospitably by the engineers still working there. Further excavation had brought nothing interesting to light since our last visit except a few small glazes of late Roman and Byzantine times. After a well-earned night's rest, I decided not to cross the Küzül Irmak here, but to proceed farther southward via Keskin to Köprü Köi. The road showed nothing interesting. It runs from Keskin southward along a small river until it joins the

FIG. 66.—NIKSAR

FIG. 67.—NIKSAR. THE CITADEL WALL

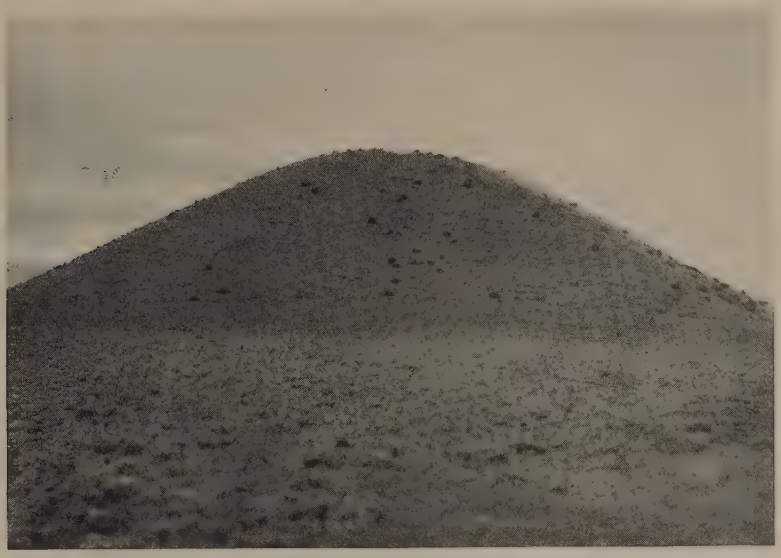


FIG. 68.—A LARGE TUMULUS NEAR PAZARD KÖI

FIG. 69.—TURKHAL

main Angora-Yozgad road. Not far from this point we noticed a large *hüyük*. The road ascends westward toward the Keskin Dagh, through an extension of which the Küzül Irmak forces its way near Köprü Köi. Finally, at two o'clock in the morning of the next day, we reached Angora.

Fig. 70.—Han Öni

Fig. 71.—Zileh

At Angora we had the great pleasure of meeting Dr. E. Forrer and Professor Weigand, with whom we made various excursions in the environs of Angora; then later we traveled together as far as Yerköi. The first of our excursions was to the *tumuli* a short distance south of Angora, a few of which had been opened.

The largest was especially interesting, as it showed how they had been built (Figs. 75–77). First a small ring of earth was thrown up; then the space in

FIG. 72.—A CAMEL CARAVAN NEAR ALADJA

FIG. 73.—THE EXPEDITION AT IMATLI

the center was filled by throwing in earth from all sides. After this was leveled, earth was thrown up against the outside of the wall all around and then the top was leveled by throwing in earth from all sides toward the center. This

must have been repeated five or six times. This technique made it possible for a great number of workmen to work at the same time, and furthermore they

Fig. 74.—On Our Way in the Küzül Irmak Valley

Fig. 75.—Angora. The Largest Tumulus

had always an equal slope on all sides. On the upper part of the second *tumulus*, which is far more destroyed than the first one, one could notice thin walls

consisting of field stones set one above another. These can have had no structural importance, but were perhaps set up only as partitions for the parts which the different workmen or groups of workmen had to finish (Fig. 78).

FIG. 76.—ANGORA. SCHEMATIC SECTION OF LARGEST TUMULUS

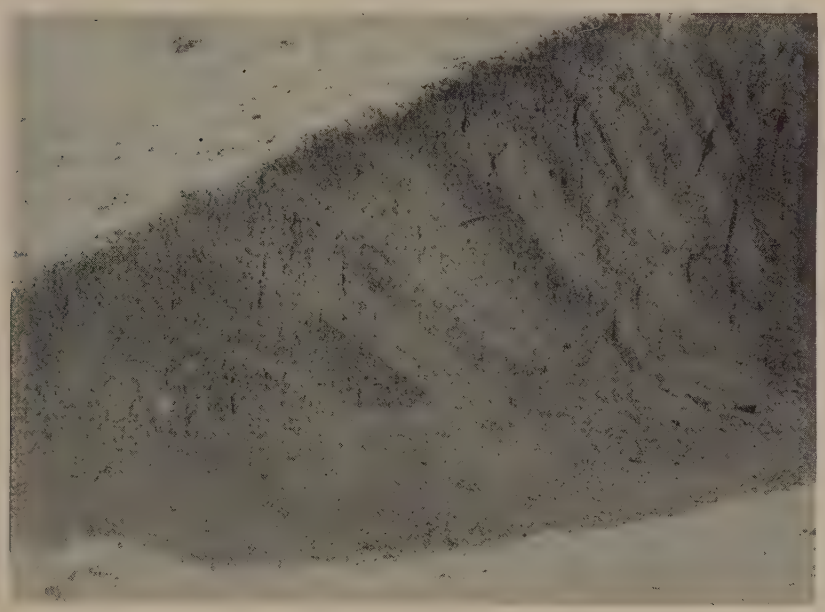


FIG. 77.—ANGORA. ACTUAL SECTION IN LARGEST TUMULUS

Another excursion was to the so-called "Phrygian necropolis," where a few large pottery vessels had recently been unearthed. Another day, under Professor Schede's amiable guidance, we visited a small *hüyük* at Amakzis, 18 kilometers west of Angora; and one day before we finally left Angora we made a long *reconnaissance* southwestward along the Angora-Beli Köprü road, where we found that the large fortress marked near Takhta Kaleh on the Kiepert

map was a natural formation. But very near it we found at Boz Tepe a large post-classical settlement.

After having our car completely overhauled, we left Angora, following the main road to Köprü Köi as far as Chakal.[1] There we turned westward, examining a *hüyük* and then proceeding to the famous Giaur Kalessi. A long, difficult ride then brought us to Bahla (Kartal), which lies just off the main road to Köprü Köi. From Bahla we made another excursion southward toward the

Fig. 78.—Angora. The Second Tumulus

Pasha Dagh, during which we investigated three very interesting *hüyüks*. That evening we reached Köprü Köi. From Köprü Köi we turned southeastward, following the Kirshehir road, near which we noted a number of *hüyüks*. Kirshehir itself is a large and prosperous town among the mountains. Surrounding it are several *tumuli*. Besides the citadel mound, itself a large *hüyük*, we investigated two smaller ones in the neighborhood of this town, near each of which appeared two or three *tumuli*. From Kirshehir we went back along the same road by which we had come, until we reached Chugun. There the road forks, one way leading to Köprü Köi and the other through the Malya Chölü to Yerköi. At Üchayak we passed the remains of a huge Byzantine church

[1] For details on what follows, cf. pp. 139–48.

(Fig. 79) and, proceeding northward, a large *hüyük* near Khas and a large cave complex called by the natives Yarüm Kaleh.[1] From this point the road follows a broad dry river bed, which it leaves near a little village to climb in a very difficult ascent the mountain range (spurs of the Chichek Dagh) dividing the Malya Chölü from the Delidje Su. The descent was easier, and near Mejidiyeh

Fig. 79.—Üchayak

we came out of the mountain complex. That same afternoon we reached Yerköi, where for six days we were the guests of the railroad engineers.

Excursions made from this point brought us to Büyük Nefez Köi, Kavass Maghara, and Asha Elma Hajilar.

At Yerköi we separated from Dr. Forrer and Professor Weigand, as we had to continue our way southward. From Yerköi we followed the Delidje Su east-

[1] Cf. p. 151.

FIG. 80.—KÜL TEPE

FIG. 81.—NIGDEH

ward, exploring the various *hüyüks* situated in this valley as far as the *sivri* near Alishar. We then turned southwestward, finding our way through a dry, high plateau to Jiblakh on the Karajerli Su. There also we were the guests of railroad engineers, through whose courtesy I was enabled to excavate on a small *hüyük* beside the railroad. From Jiblakh we proceeded southward toward Kaisariyeh, investigating a number of *hüyüks* on the road. From Kaisariyeh

FIG. 82.—NIGDEH. A TUMULUS

itself we made an excursion to the Kül Tepe, which now has a rather sad aspect (Fig. 80). The surface is torn by excavators' trenches, and everywhere appear destroyed foundations. From Kaisariyeh we followed the main road to Nigdeh (Fig. 81). Along this road, on conspicuous mountains, were *tumuli* (Fig. 82). On the way from Nigdeh to Ulukūshlar I visited Öküzli Hissar, the site of ancient Tyana. I saw there the remains of three huge stone eagles very similar to the one which I had found at Bulumashlü. From Ulukūshlar, after having discharged our faithful Hüssein, we returned by rail to Stambul.

# III

# MONOGRAPHS

## THE KEPEN *HÜYÜK* NEAR SIVRI HISSAR

The town of Sivri Hissar is situated 94 kilometers southeast of Eskishehir on the south slope of a pointed rock formation (Turkish, *sivri*) on the top of which are the remains of an Ottoman fortification (Figs. 83 and 84). South of the town extends a valley, widening gradually toward the broad plain through

FIG. 83.—SIVRI HISSAR

which the Sakaria River flows. Five kilometers south of it, in the middle of the valley, not far from the small village of Kepen, is situated a large *hüyük* (Figs. 85 and 86). It is approximately 350 meters long, 190 to 220 meters wide, and about 14 meters high. I collected pottery of various periods; archaic types were especially frequent, many pieces having a red slip like those found at Boghaz Köi and Kül Tepe. On the top were marble fragments from a probably Byzantine church (Figs. 87 and 88). In the village itself, as also in Sivri Hissar,

many Byzantine building fragments were seen. About 1 kilometer south of the *hüyük* extend the remains of a Roman site (Fig. 89). Traces of foundations are still to be recognized, and the whole surface is covered with fragments of tiles and *terra sigillata* pottery fragments.

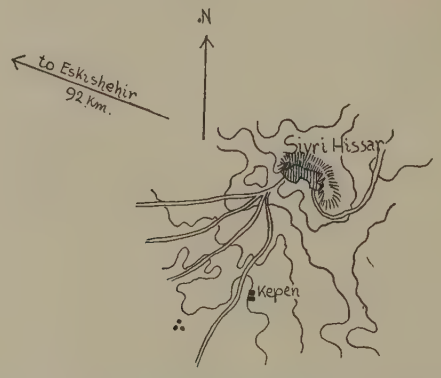



FIG. 84.—MAP OF SIVRI HISSAR AND ENVIRONS. SCALE, 1:300,000

FIG. 85.—THE KEPEN HÜYÜK

At Sivri Hissar are, in addition to the before-mentioned fragments, a number of sarcophagi, altars, and capitals, also two Seljuk lions.

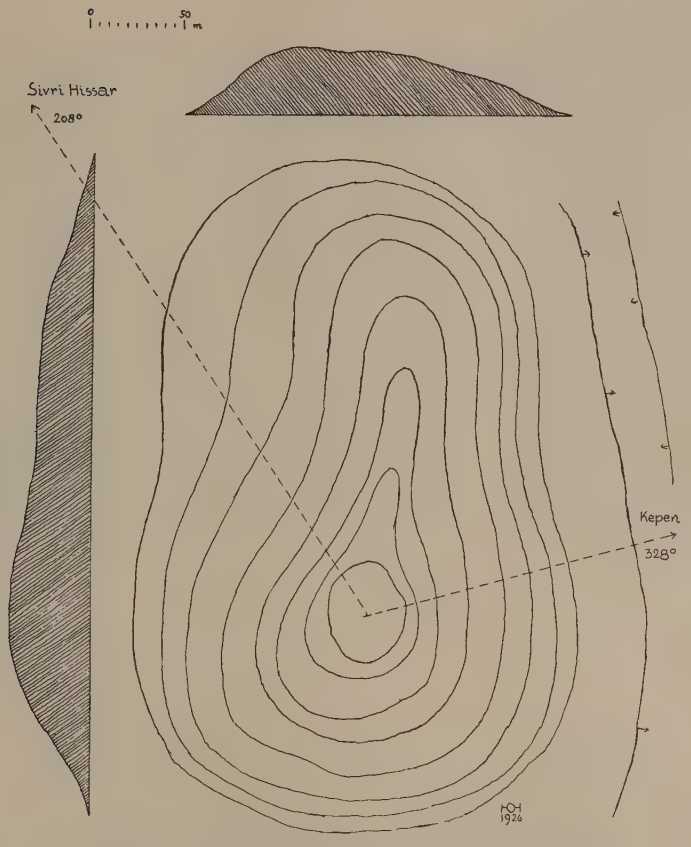



FIG. 86.—THE KEPEN HÜYÜK. PLAN AND SECTIONS

FIG. 87.—THE KEPEN HÜYÜK. BYZANTINE BUILDING FRAGMENT.

FIG. 88.—THE KEPEN HÜYÜK. BYZANTINE BUILDING FRAGMENT.

FIG. 89.—A ROMAN SITE SOUTH OF THE KEPEN HÜYÜK

## THE PHRYGIAN RELIEF AT FAHARET CHESME

Faharet Chesme ("Faharet spring") is situated 29 kilometers southwest of Angora on the Beli Köprü road (Fig. 90). The wall from which the water of the spring emerges contains, besides a number of Byzantine architectural fragments and two Turkish inscriptions, a small relief (Plate VB). It is a grayish basalt slab, 60 centimeters high and 49 centimeters wide, the lower part of which is destroyed on one side. The stone shows in low relief two disks, each

FIG. 90.—SITUATION OF FAHARET CHESME. SCALE, 1:300,000

attached by a short neck to a double-lined rectangle below. This rectangle is itself divided into two compartments, one containing a swastika, the other a number of vertical, slightly wavy lines, each of these patterns being centered under one of the disks.

This representation is most unusual. I know of only one similar. Such disks, found on a Phrygian altar, have been interpreted as highly conventionalized pictures of Kybele and Attys;[1] but, as far as I know, no representations have previously been found showing the two disks in combination with the swastika and the vertical parallel lines.

[1] E. Brandenburg in *Abhandlungen der historischen Klasse der K. Bayerischen Akademie der Wissenschaften*, XXIII (1906), 695–96 and Fig. 51.

## THE ANCIENT SETTLEMENT AT KIRIK KALEH[1]

Just 12 kilometers south of where the new railroad from Angora to Kaisariyeh crosses the Küzül Irmak, the ancient Halys River, lies a small town called Yakhshi Han (Figs. 91 and 92). Directly east of it, about 8 or 9 kilometers farther, in the valley of a small river, the Keskin Chai, which empties a little south of Yakhshi Han into the Küzül Irmak, is a hill, probably of volcanic origin, called Kirik Kaleh (Fig. 93). The top of the hill is truncated. It slopes gradually on the southern and eastern sides, but drops nearly vertically at the northern and western sides (Fig. 94). Its greatest dimensions are, from northwest to southeast, 400 meters, and from northeast to southwest, 320 meters; its highest elevation above the general level of the valley is 64 meters. The small river of this valley flows around the north and west sides of the Kaleh. On the south end it is connected with a small elevation which gradually rises until it reaches the mountains closing this valley toward the south. The top of the Kaleh is surrounded by a wall with the exception of a small piece at the north end where the abrupt slope of the hill makes all fortification unnecessary (Fig. 95). The wall is to be recognized mostly by long ditches which the natives have dug in order to get foundation stones for new building. In very few places is the foundation itself preserved. In Figure 96 it appears, in a width of about 1–1.50 meters, as a mass of irregular stones carefully put together. At the south side is still to be recognized a gate construction, to which leads a road coming up the hill from the east and continuing toward the highest elevation of the Kaleh (Fig. 97). There again some mural remains are to be recognized, but without excavating it is impossible to see their meaning. The surface is covered with pottery fragments of Byzantine and classical times; but, especially at the northeast side of the highest point, pottery with a red, highly polished slip has been collected by myself, identical with the kind found at Boghaz Köi and other

FIG. 91.—SITUATION OF KIRIK KALEH. SCALE, 1:400,000.

[1] This and the following monograph were first printed in preliminary form in the *American Journal of Semitic Languages and Literatures*, XLIII (1927), 288–96.

probably "Hittite" sites in the central part of Asia Minor.[1] There I found also a few painted pieces, similar to those coming from Kül Tepe.

FIG. 92.—THE KÜZÜL IRMAK NEAR YAKHSHI HAN

FIG. 93.—KIRIK KALEH

The small elevation to the south of the Kaleh bears the remains of a rather large classical and post-classical city. This site has long been known, and is

[1] Cf. J. G. C. Anderson in the *Annual of the British School at Athens*, IV (1897–98), 72; J. W. Crowfoot in *Journal of Hellenic Studies*, XIX (1899), 38.

marked on Kiepert's map[1] as probably the ancient Eccobriga.[2] Unfortunately, there has just been built on this very spot a large factory, and a great amount of very valuable archaeological material has already been and will be destroyed

FIG. 94.—KIRIK KALEH. CLOSER VIEW

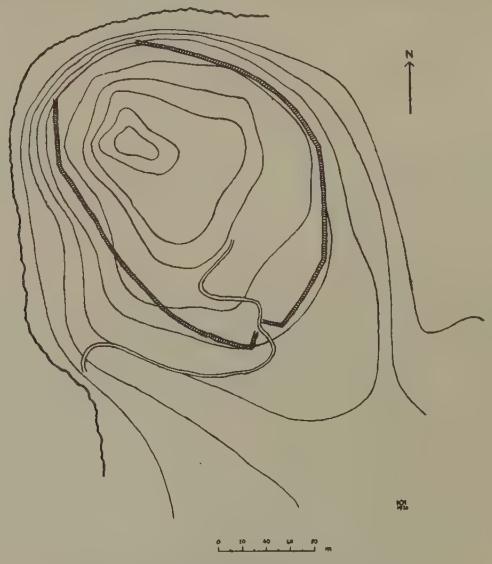



FIG. 95.—KIRIK KALÈH. PLAN

by the digging out of foundations in order to get new building material—a custom frequently found in Anatolia—and in terracing a part of the west slope of

[1] R. Kiepert, *Karte von Kleinasien*, Blatt Angora.

[2] Cf. Anderson, *op. cit.*, p. 72, and in *Journal of Hellenic Studies*, XIX (1899), 99; also W. M. Ramsay, *The Historical Geography of Asia Minor* (Royal Geographical Society, *Supplementary Papers*, IV. London, 1890), pp. 242, 251, 259.

the elevation. The work of destruction was already very far advanced when we arrived there on our way to Yozgad, so that investigation of the architectural remains would have been in vain. Furthermore, exceptional circumstances

FIG. 96.—KIRIK KALEH. REMAINS OF ANCIENT WALL

FIG. 97.—KIRIK KALEH. ROAD LEADING TO AN ANCIENT GATE

would have made a careful survey a very delicate task. So I will state the few things which I myself could see through the courtesy of the government officials and of the engineers working there, who were our kind hosts for two days.

At the south end of the Kaleh, perhaps 100 meters before it separates itself from the smaller elevation, there seems to have been a large temple, judging from the remains of two big foundation walls and a number of fragments of Ionic capitals and even of columns themselves which were found there while excavating a terrace for the new buildings (Figs. 98 and 99). Numberless fragments of all kinds of pottery and tiles of a rather late classical, perhaps even Byzantine, period were discovered there. Under these foundations again some fragments of the pottery with red slip were brought to light. A limestone mold, now in the new museum at Angora, for an unrecognizable bronze object is likewise said to have been found in this place (Fig. 100). A little farther to the

FIG. 98.—KIRIK KALEH. A MODERN BUILDING SITE DISCLOSING FRAGMENTS OF CLASSICAL ARCHITECTURE.

FIG. 99.—KIRIK KALEH. BITS OF IONIC COLUMNS.

south a number of burials had been unearthed or, better said, destroyed. It was impossible to give them, therefore, any but an approximate date. It seems sure only that they were pre-Mohammedan.

Two hundred meters farther south, where a second terrace was built, the workmen struck a real necropolis. Aside from a few Christian tombstones (cf. Fig. 100) of the Byzantine era, *terra sigillata*, and glass fragments, nothing of particular interest had been found there. But on the day we arrived they dug out an Egyptian statuette about 35 centimeters in height, broken in two but nevertheless very well preserved (Plate VI). Since this piece is of the time of the Middle Kingdom, as Dr. Allen shows in the next monograph, it was quite surprising to find it in so late a necropolis. But the fact that the workmen, at nearly all the places where they dug, struck, at a depth of 2 meters in the ground,

pottery of much earlier periods, mingled with the red-slipped "Boghaz Köi" pottery and painted pottery, suggests the theory that this piece had come here during these earlier periods and later on by some chance had been dug up and kept as a curiosity until it ended in this late necropolis. This statuette, like the other pieces, is now in the new museum at Angora. The director-general of the Minister for Public Instruction, Reouff Bey, had been there to save what could be saved, as I heard later when I passed there for the second time, coming back from the expedition.

The geographical position of Kirik Kaleh, a natural fortress, itself makes probable its early settlement, especially since we may assume that here passed

FIG. 100.—ANCIENT OBJECTS FOUND AT KIRIK KALEH: LIMESTONE MOLD (IN CENTER), CHRISTIAN TOMBSTONES (AT SIDES), ETC.

the ancient road which connected ancient Ankuvash (Angora) with Hattushash (the capital of the Hittite Empire from about 1800 to about 1200 B.C.).

Besides the pottery, another feature which speaks for early occupation of this site is the presence of a large subterranean temple about 16 kilometers to the northeast in the Keskin Sivrissi.[1] This temple, which we happened to discover in the course of our expedition, is very old. In addition to this, about 800 meters east of the Kaleh there is a small *tumulus*. But it has not yet been opened and therefore cannot be dated at this time.

[1] Cf. pp. 68–75.

# A MIDDLE KINGDOM EGYPTIAN CONTACT WITH ASIA MINOR

By T. George Allen

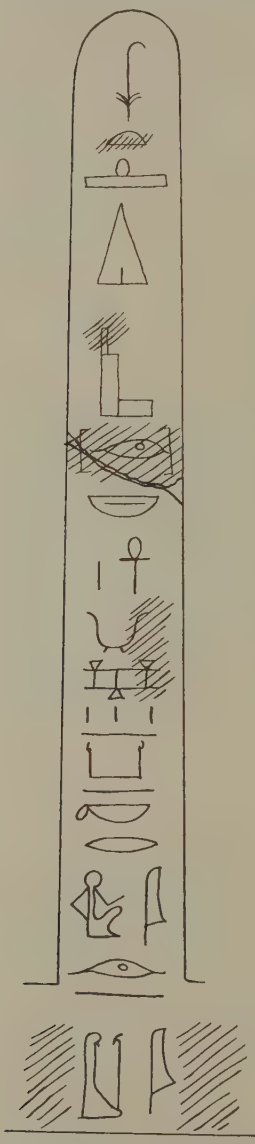


Fig. 101.—The Inscription on the Egyptian Statuette Found at Kirik Kaleh.

That the statuette (Plate VI) seen by Mr. von der Osten at Kirik Kaleh is purely Egyptian is evident from its style, its material, and its inscription. Among figures in similar pose one might mention pieces in Berlin (8432)[1] and in the Art Institute of Chicago (10.239).[2] The latter is of hematite; the former, like this Asia Minor find, is of black granite. The Art Institute piece is Eleventh Dynasty work, if one may judge by its owner's name, Nebhepetre. Costumes more exactly like that of our find are pictured on a Cairo stela[3] which came from a Twelfth Dynasty cemetery at Abydos.[4]

The inscription (Fig. 101) consists of a single column of hieroglyphs down the back of the plinth, followed apparently by a single horizontal line reading from right to left along the back of the base. As both ends of this line are illegible, the visible text reads as follows:

*ḥtp dy (ny)-śwt Wśyr nb ᶜnḫ Wp-wꜣwt n kꜣ n(y) Kry yr(yw)·n ... y ...*

An offering which the king gives [to] Osiris the lord of life [and to] Upwawet for the spirit of *Kry*, begotten of [name of parent lost except for the final letter *y*] . . .

The offering formula here,[5] though unusually brief, corroborates by its phraseology the stylistic evidence for a Middle Kingdom date. The name *Kry*, too, is found in several Middle Kingdom inscriptions, though

[1] *Ausführliches Verzeichnis*, pp. 82 (illus.) and 83.

[2] *Handbook of the Egyptian Collection*, p. 51.

[3] Lange and Schäfer, *Grab- und Denksteine des Mittleren Reichs*, No. 20360.

[4] Mariette, *Catalogue général des monuments d'Abydos*, No. 719.

[5] On this formula see Gardiner's detailed discussion in Davies, *The Tomb of Amenemhet (No. 82)*, pp. 79–93, since summarized in his own *Egyptian Grammar* (Oxford, 1927), pp. 170–73.

the examples cited by Lieblein[1] happen all to be feminine, rather than masculine as here. However, other Egyptian names common to both sexes are known, and there is nothing feminine in the form of this one. The writing, though crude, is so Egyptian in feeling that it and the material together should prove the origin of this statuette in Egypt itself.

That an Egyptian statuette of the Middle Kingdom (around 2000 B.C.) should have been discovered amid Graeco-Roman remains is explicable to both Mr. von der Osten and myself only on the supposition that it was found at that period during building operations which penetrated into "Hittite" strata lower down and was preserved as a curiosity by its finders. The circumstances under which it originally reached Asia Minor must remain obscure. In age and material it supplies an interesting parallel, though from a much more inaccessible part of Asia Minor, to the statuette of Sitsnefru found by an American missionary about 1882 at Adana and now in the Metropolitan Museum of Art at New York. Strange to say, the Sitsnefru figure also seems to have been associated with classical material.[2] Supplementing the Tale of Sinuhe for Palestine and the burial of Hepzefi at Kerma in the Sudan, such finds in Anatolia are beginning to forge another link in our knowledge of Egyptian relations with distant peoples and races four thousand years ago.

[1] *Dictionnaire des noms hiéroglyphiques.* Dr. Hermann Ranke has since kindly informed me that the Berlin *Ägyptisches Wörterbuch* files contain only one , a Middle Kingdom woman (Lieblein's No. 1620), but that they show also a male of the early Eighteenth Dynasty (on Berlin 14994, a stela dated to Thutmose I). Cf. also a male on a Middle Kingdom stela (Cairo 20054 *i*).

[2] See Winlock in the Metropolitan Museum *Bulletin*, XVI (1921), 208–10.

## THE SUBTERRANEAN TEMPLE IN THE KESKIN SIVRISSI

About 20 kilometers by air line northeast of Yakhshi Han, the small town near the railroad bridge over the Küzül Irmak, 48 kilometers east of Angora, is situated the Keskin Sivrissi, in itself a remarkable mountain formation. Having heard from an Austrian engineer at Kirik Kaleh that there was a great cave in this mountain, I decided to investigate it personally. In our automobile

FIG. 102.—SACRED TREES ON THE WAY TO KESKIN SIVRISSI

we followed the valley of the Keskin Chai, the little river in whose valley Kirik Kaleh is situated, about 6 kilometers to the east, then upgrade on a bad, nearly nonexistent road, with the mountain chain closing the valley to the north. The top of this mountain range is a rather broad, smoothly undulating terrain about 2 to 3 kilometers wide, with steep descents at its southern and northwestern ends. The slope consists of a grayish-yellow limestone practically devoid of vegetation. A small group of very old cypresses nearly at the top of the slope appears as a deep black spot (Fig. 102). Among the trees are a few

Mohammedan tombs. The many little pieces of wool threads and of garments nailed to the trees show that the natives consider the place holy. They believe that, if they are afflicted by an illness, a piece of their clothing nailed to such a sacred tree will cause the sickness to leave them.[1]

At the very top of this range the road leading to the north strikes a second road, which runs from southwest to northeast. Even before this junction the peak of the Keskin Sivrissi had become visible, looking like an artificially built pyramid (Fig. 103). As we advanced, the imposing mountain gradually appeared more clearly (Fig. 104). It is connected with the mountain range itself by a saddle, and forms, so to speak, the end of it. The raod we were following to the northeast became gradually better. The last two-thirds, leading along the

FIG. 103.—KESKIN SIVRISSI

northwest slope of the mountain, looked even as though it had been built recently. In some places it had been cut directly in the living rock (Fig. 105). The mountain slopes precipitously several hundred meters to a narrow valley. Across the valley a second range rises, higher than this one, a picturesque and wild formation. The whole panorama is beautiful. One mountain range appears behind another, all without vegetation and with marvelous coloring: blue, gray, yellow, red. The different strata appear to be mostly limestone, but there is also some greenish clay. All this is dominated by the imposing *sivri* itself. The road follows the slope at the height of the saddle, and after reaching the mountain it continues at about the same level (Fig. 106).

[1] During our expedition we passed many such places. One near Köhne, for instance, east of Yozgad, was the burial place of an *imam* near an ancient classical temple. There the bits of cloth had been fastened to little sticks and put into the tomb. At another, at Bulumashlü, a hot spring southwest of Yozgad, the pieces of cloth had been tied around stones and thrown in a great heap beside the remains of a huge stone eagle of probably "Hittite" origin.

We left our car at this point, fearing that we could not turn around on such a relatively narrow road (2.50–3 meters in width), where the slope went up on

Fig. 104.—Keskin Sivrissi. The Procession Road

Fig. 105.—Keskin Sivrissi. Roadway Cut into the Rock

one side at about 35 degrees and down on the other at the same angle. So we continued on foot. After perhaps 800 meters the road widened, forming a

narrow terrace where wagons could easily turn around. And there the road ended also. About 50 meters before the end of the road we observed a quantity of stones, looking like a petrified river coming down from near the top of the *sivri*. Following it up the slope in a hard and dangerous climb, we arrived, after some 200 meters, which took us about an hour, at a single huge rock under which was the entrance to a cave (Fig. 107). A little farther down there was a small rectangular niche cut in the rock (Fig. 108).

FIG. 106.—KESKIN SIVRISSI. ROAD ALONG THE MOUNTAINSIDE

At the cave entrance is a sort of hall (3 meters in width, 12.5 meters long) from which a small doorway leads to a little room with two holes for windows. The room is of very rough workmanship. Within it are two or three little niches at a man's height on the wall, for lamps, and the wall is still blackened by soot in these places.

From the hall a narrow entrance (90×80 centimeters) leads to a great, roughly domed, oval cave room, its floor covered with stones and earth (19×13 meters, 6 meters high in the middle; see Fig. 109). It left the impression of being unfinished. At the far end, in the same axis as the entrance, appeared another small hole, the entrance to a tunnel 16 meters long (75×60 centimeters) which widens toward the middle, where it turns slightly to one side, narrowing

immediately afterward to the same size as at the beginning. At the end of this tunnel a shaft about 3 meters high leads upward to a second room. Though the tunnel and the shaft showed much more careful workmanship than did the first room, this second one surpassed even them (Fig. 110). It is nearly oval, 11.80 meters wide, 15.50 meters long, and 2.50 meters high. Its vault is supported

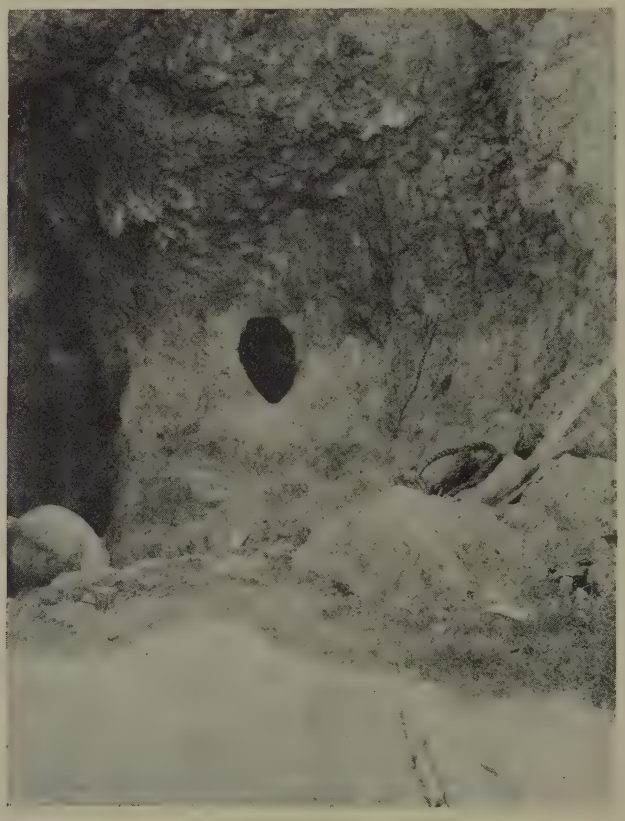


Fig. 107.—Keskin Sivrissi. Entrance to Cave

by three pillars (1.80 meters square on the average) cut in the living rock; a fourth is still connected with the side wall, but the beginning of the work of separating it can be seen. Diagonally opposite at each end are cisterns, both covered inside with a reddish slip. Facing the cistern at the inner end of the chamber appear two niches containing altars, and in various places again are small blackened niches for little lamps. To this same cistern leads a narrow trough which fills it with running water, coming out of the wall at the end of the room. Near by, between the altars and the cistern, again in the same axis

with the entrance to the first room, appears the entrance to a second tunnel, unfortunately closed by stones and earth. The floor of this second chamber also is covered with stones and earth, but not to such an extent as that of the first room.

There is no doubt that this great place of worship—since such we shall have to consider the cave, as will be shown later—was never completed. The absurdly narrow entrance and the small dimensions of the tunnel leading to the

Fig. 108.—Keskin Sivrissi. Niche in Rock

second floor suggest that the tunnel, the first room, and the entrance hall are simply still partly filled with some of the material removed from the second chamber; and the uneven floor of this second chamber is explained if we suppose that it contains material from a third room, or at least from the excavation of another tunnel leading to a third room. Furthermore, the unfinished pillar in the second room and the startling contrast of the cleanly worked and vaulted second room, especially the altars and the cisterns, with the rough and seemingly unfinished work of the first room and the entrance hall support the same conclusion.

As for the interpretation as a place of worship, a real subterranean temple,

the two altars alone would be proof enough. The road leading to this cave (cf. Fig. 104) suggests a procession road. There is otherwise no need at all for such a road on this mountain range, as there are no villages on it, and especially since the road leads only to the platform below the entrance.

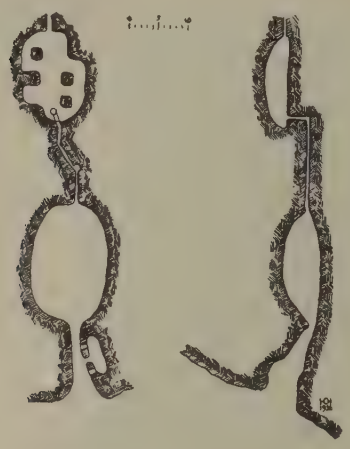


FIG. 109.—KESKIN SIVRISSI. PLAN AND SECTION OF CAVE.

FIG. 110.—KESKIN SIVRISSI. PLAN AND SECTION OF SECOND ROOM OF CAVE.

FIG. 111.—AHALI. MONOLITH CONTAINING A CAVE

Our studies and researches have as yet not advanced far enough to give such a monument a date or even to attribute it to a certain people. Nor do we know to what kind of deity it was built. We know only that in this part of Anatolia, the ancient Paphlagonia, it was a custom to worship a mountain itself,[1] or,

[1] Cf. R. Leonhard, *Paphlagonia* (Berlin, 1915), pp. 239–40, where he gives a reference to Strabo (XII, 562), who certifies this custom for this region.

better, "the deity localized therein." Since it is known that mountain deities were venerated in caves,[1] I am inclined to see in this subterranean temple such a worshiping-place.

The surroundings of the Keskin Sivrissi and its dominating appearance suggest that this monument was one of the most important worshiping-places of this whole region at a time perhaps as remote as the second millennium B.C., if not still earlier. But before trying to give any more definite date, much more

FIG. 112.—AHALI. CAVE ENTRANCE, WINDOW, AND TROUGH

investigating and exploring must be done. To point out once more the significance of this particular mountain, I wish to add that after leaving Kirik Kaleh for Keskin, we could still see this *sivri* for nearly three hours as we rode in the automobile; and later, as we came from the north, it was our "lighthouse" for nearly half a day when we were trying to find a road from the Küzül Irmak to Yakhshi Han.

South of Kirik Kaleh there is another, but much smaller, cave, also of a rather interesting type, in the neighborhood of the little village of Ahali. Following the valley which leads from the Keskin Chai valley southward, after passing three small water-mills on the east slope of the valley we noticed on the

[1] Cf. *ibid.*, p. 239, n. 3.

other side a few big rocks, one of which showed a hole. This last, an immense monolith, is situated in a vineyard; in fact the whole valley is covered with vineyards and gardens (Fig. 111).

Over some smaller rocks lying irregularly at one side, some having rough gashes which facilitated climbing, we entered the small cave through a slightly vaulted passage (2.50 meters long, 1 meter wide). The room itself is 6×3.75 meters and 2 meters high, narrowing toward one side, where there is a large depression in the floor. At the opposite side is a very deep window. The window is flanked on the right by a little hearth and on the left at the same height by a protuberance with a hole in the middle leading to the outside of the rock, where a trough leads down to the ground (Fig. 112). On the walls are two small blackened niches for little lamps, besides some small circular holes penetrating about 10–15 centimeters into the rock (Fig. 113).

Fig. 113.—Ahali. Plan and Section of Cave.

The depression in the floor was surely once filled with straw or some other soft material to form the bed of the cave-dweller. Four of the small circular holes facing each other at the window and the door we may interpret as having originally held wooden sticks supporting thick wool fabrics or animal skins in order to close those openings. The protuberance with the hole and the connected outlet is possibly an early latrine.

As for the date of this monument, there is not much to be said. It may be the cell of a Byzantine hermit; but it may also be of a much older period, perhaps for a guard. From the window nearly the whole southeastern part of the valley is to be seen.[1]

[1] We found a similar cave on the mountain range north of Yerköi (a town south of Yozgad). But there also no sign was visible which might give any information as to a possible date.

## THE *HÜYÜKS* IN THE DELIDJE-KONAK SU, SARAI SU, AND KARAJERLI SU VALLEYS

The Küzül Irmak rises in the western part of the Armenian mountains, a little more than 38° east of Greenwich, about 70 kilometers south of Kerasund, a port on the south coast of the Black Sea. It first flows directly west; then, shortly after passing Sivas, it follows the southeastern slope of the Ak Dagh in a southwesterly direction toward Ürgüb, where it turns gradually due north toward Kalejik. Here it changes its direction again to the northeast to Osmanjik, after which it turns sharply to the west again, finally flowing, after another "detour," into the Black Sea along about the same line which it had followed from Kalejik to Osmanjik. This river and its valley have been described so often from different points of view that I will not go into unnecessary detail here, although much more could be said from the geographical point of view concerning this extremely interesting and important river.

Its main tributary is the Delidje Su, whose sources lie somewhere southwest of Ak Dagh Maden, a large town west of the northwestern slope of the Ak Dagh. This river flows nearly parallel to the Küzül Irmak, turning also sharply northward and emptying near the small village of Kula into the Küzül Irmak in the middle of the stretch between Kalejik and Osmanjik.

For this investigation only two of the small tributaries of the Delidje Su are important. Nearly all of them except the Karajerli Su are dry during the summer. The Karajerli Sú rises only a few kilometers west of the bed of the Küzül Irmak at the southwestern end of the Ak Dagh, flows toward the west to Karafakeli, then turns northward. A little west of Hadji Shefatli it joins the Delidje Su, which from its beginning to this point is usually called Konak Su. The second tributary with which we have to deal here is the Sarai Su, which rises a little north of Yozgad and empties into the Delidje Su west of Yerköi.

The Delidje Su basin includes most of the region bounded on the south and west by the mountains which outline the right bank of the Küzül Irmak, on the north by mountain chains which separate it from the Yeshil Irmak basin, and finally on the east by the Ak Dagh complex near Ak Dagh Maden. This region, with the southern part of the Yeshil Irmak basin, was the very heart of the great Hittite Empire of the second millennium B.C. It is a mountain land, irregularly divided, but nevertheless rich in fertile valleys and elevated plains, although practically devoid of trees. Only in the north are there "woods"—small, weakly shrubs rather than trees (cf. Fig. 30). In the fertile

valleys near springs or streams there are of course trees, and on the mountain slope facing Yozgad on the east there is also a real pine wood of considerable extent (Fig. 114). But apart from these the mountains spring up bare and rocky out of the gently undulating plains, often forming picturesque, deep-cut

Fig. 114.—Pines near Yozgad

Fig. 115.—Aga Dede

valleys. Another type of landscape here is the steppe, wrongly called desert. One steppe, lying south of the Delidje Su, is called Malya Chölü; the other lies west of the Küzül Irmak. But both are regions with which we have not to deal here.

During the expedition we investigated this territory twice. First, we came by ourselves from Keskin and followed the Delidje Su as far as the Yerköi

railway station, there turning to the north and following the Sarai Su to Yozgad. From there we made an excursion to Terzili, near the Delidje, or Konak, Su, as it is called in this part, following it to the *sivri* near Alishar.

The second time, traveling with Dr. E. Forrer, of the University of Berlin, and Professor Weigand, of the University of Würzburg, we reached the Delidje Su from the south on our way from Kirshehir. After renewed investigations in the neighborhood of Yerköi we started again alone, following the Delidje Su to the *sivri* of Alishar and then, later on, following the Karajerli Su from Hadji Shefatli to Karafakeli.

From Keskin we followed eastward a road which reached the Aghach Dere not far from Aivalü. Through the Aghach Dere flows a tributary of the Delidje Su called Kilinj Özü. Ten kilometers east of Keskin, about 1 kilometer south of the road, is the Aga Dede, a Mohammedan holy place, where I collected a number of pottery fragments of an uncertain period (Figs. 115 and 116). In a fertile valley not far from it, near the village of Kurgali, a large *hüyük* could be seen (Fig. 117). Eighteen kilometers farther there were two more near the village of Kochakli (Fig. 118).

FIG. 116.—AGA DEDE. PLAN AND SECTION.

Near Ughur Kaleh we reached the post road from Angora to Köprü Köi and Yozgad, after passing Aivalü (Fig. 119), a *hüyük* discovered and described by E. Chantre.[1] The landscape has a sad and sinister aspect. Bare mountains and dry grass steppes alternate with salt steppes. The coloring is marvelous (Fig. 120). Like the mountains on the west bank of the Küzül Irmak on the road from Angora to Yakhshi Han, these too show violet, blue, red, and greenish-yellow strata of clay and limestone, the typical sedimentary formation. The steppes were covered with dry yellowish or grayish grass. In some places the salt excrescence appeared like snow. There were no human beings or traces which might prove their having been here; only a few big eagles, not disturbed by our passing through in our automobile, sometimes remained so close that we could easily have thrown a stone at them. This landscape changes little even

[1] E. Chantre, *Mission en Cappadoce.*

after reaching the Delidje Su valley itself; the same aridity continues (Fig. 121).

At Sekili Köprü, near which are remains of a Seljuk *han*, we crossed the river, which here flows slowly through a girdle of marshes varying in width. To the north the mountains slope gradually upward toward the high mountain

FIG. 117.—THE HÜYÜK NEAR KURGALI

range behind which lies Boghaz Köi, near which village are the remains of the probable capital of the Hittite Empire. This undulating slope is divided by many valleys leading to the north, in each a dry river bed. After crossing the last side valley before reaching the Sarai Su, the valley widens and gradually the dryness gives way. First near the river bed, then enlarging more and more,

FIG. 118.—TWO HÜYÜKS NEAR KOCHAKLI

until they occupy the whole valley, appear grain fields; but at only one place, near the Hadji Bey *chiftlik* ("farm"), appear also a few trees, long to be seen as black spots. Near this place we saw also the first *hüyük* in this region (Fig. 122).

Two kilometers farther, on the north side of the river, is a second *hüyük* (Fig. 123), directly north of the railroad station of Yerköi south of the river. In this place R. Kiepert in his map locates an Armenian village, Tozde Köi,

which no longer exists.[1] The surface is covered with mostly classical and later pottery fragments, but this does not by any means imply that there is not a "Hittite" settlement beneath the classical stratum. About 3 kilo-

FIG. 119.—THE AIVALÜ HÜYÜK

FIG. 120.—MOUNTAINS AND SALT STEPPES NEAR AIVALÜ

meters southwest of this point, on the other side of the river, is a big *hüyük* near Mejidiyeh (Boyalik). Boyalik is situated on the slope leading upward to the high mountain range which divides the steppe of the Malya Chölü from the Delidje Su valley. Not far from the *hüyük* near Yerköi, and a little

[1] R. Kiepert, *Karte von Kleinasien*, Blatt Jozgad.

north of the present river bed, are the remains of a Roman bridge (Fig. 124) over which probably passed the road to Tavium, the modern Büyük Nefez Köi. Of the ancient road itself we found no trace here.

The modern post road to Yozgad bends here sharply to the east and enters the Sarai Su valley about 500 meters west of Asha Elma Hajilar. Near the end of this valley is situated Yozgad (Bozuk), the seat of a *vali*, with a fine Osmanli mosque (Fig. 125). North of Yozgad, among the remains of an ancient settlement on the Küzül Tepe, I collected only pottery of a rather late type (Roman and Byzantine). Following downstream about 18 kilometers toward the Delidje Su, shortly before the village of Sarai, but on the west side of the river, appears a rock formation containing caves (Fig. 126). The caves are very roughly cut in the rock. Around them are a great quantity of pottery fragments. Besides classical specimens, I collected also pieces with the polished red slip.

Fig. 121.—The Yozgad Road in the Delidje Su Valley

Fourteen kilometers farther to the south, near the point where the road turns sharply westward, is situated the village of Asha Elma Hajilar. There the Sarai Su forces its way through a mountain range, entering it through a remarkable gorge. On both sides of the river the cliffs rise abruptly some twenty meters or more. On the mountains west of the river are the remains of a large ancient settlement. Foundations are still to be recognized, and quantities of pottery of many types cover the top. The nearby Mohammedan cemetery shows all kinds of architectural fragments, most of them of Roman and Byzantine provenience. In the village itself are still more. Two of them were especially interesting to me, both of grayish basalt: the first, a cylindrical stone 80 centimeters high, slightly expanded at the bottom, the bottom border itself being rounded, and with a bowl-shaped depression at the top; the second piece, a large stone slab 30 centimeters thick, forming a half-circle about 2 meters in diameter, with some engraved lines.

From Asha Elma Hajilar on, the narrow Sarai Su valley is simply a great garden with all kinds of fruit trees and vineyards, until it reaches the Delidje

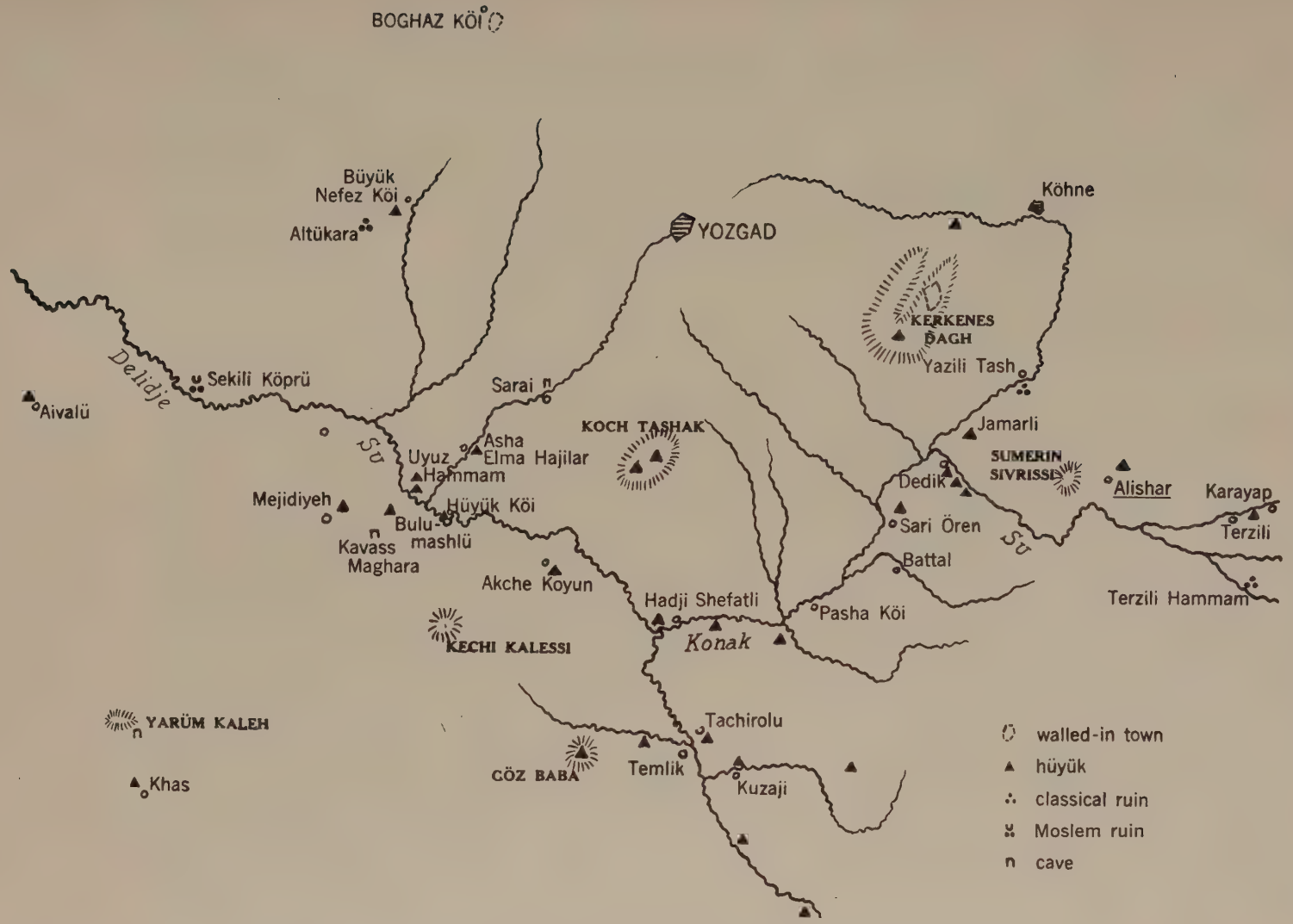



FIG. 122.—LOCATION OF HÜYÜKS IN CENTRAL PART OF DELIDJE SU VALLEY. SCALE, 1:580,000.

Su near Yerköi. Perhaps 4 kilometers west of Yerköi, at the foot of the mountain range through which the Sarai Su breaks at Asha Elma Hajilar, is a hot spring, Uyuz Hammam. In the middle of the pool is a lion head of the Seljuk period, from whose mouth flows the hot water.

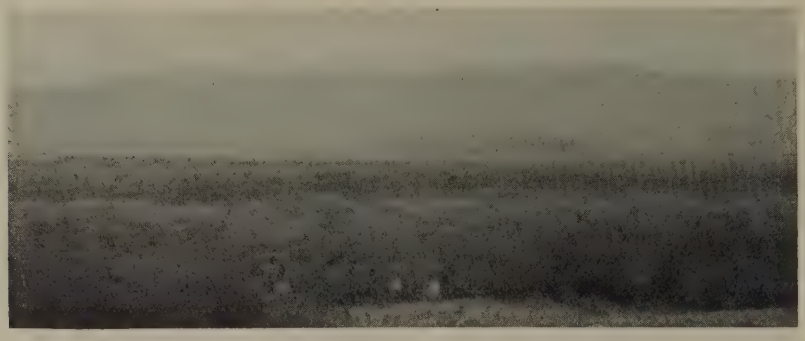


FIG. 123.—THE HÜYÜK NORTH OF YERKÖI STATION

FIG. 124.—ROMAN BRIDGE RUINS NEAR YERKÖI

The mountain here forms a terrace before descending to the actual valley. This whole terrace is covered by an enormous quantity of pottery fragments of classical or post-classical periods (Fig. 127), but I feel sure that under this stratum is also an ancient settlement. It is interesting to note that this site does not have the typical *hüyük* formation; that is, it is not a mound which by its form and color one is able to identify immediately as artificial. To me it is clear why this settlement did not form such a *hüyük*. I think the different strata have, little by little, simply filled up the terrace (Fig. 128).

Not far from this *hammam*, but on the south side of the river, is a second

one, called Bulumashlü (Fig. 129). The road which leads to it crosses the Delidje Su near the railroad bridge. There a valley leads through the mountains separating the Delidje Su valley from the *chöl* ("desert"). In fact, Bulumashlü is in that territory. It is a hillock approximately 250 meters long, with two elevations. At the northeast end is the Turkish *hammam* (Fig. 130). At the southwest end traces of wall foundations are to be seen, as also on the second elevation. Classical and Byzantine pottery fragments cover the *hüyük*. Between the two elevations I found several fragments of pottery with red slip.

FIG. 125.—YOZGAD. THE MOSQUE

Most remarkable is an embankment leading at nearly a right angle from the second elevation to the south. It is paved and at its top about 4.50–5 meters wide. It leads some 800 meters in a straight line southwest, then turns westward and stops (Fig. 131). I do not think that it is a Roman road, as it is too wide, and moreover there was no continuation at either side. Up to now, I am not able even to suggest any explanation for it.

FIG. 126.—CAVES NEAR SARAI

About 200 meters from the hill, directly beside this embankment, is a stone heap. It is a Mohammedan holy place, as is to be seen by the little pieces of

clothing tied around the stones.[1] At the same spot lies also the lower part of a huge stone eagle, showing the base, its feet, and a part of the wings and body (Figs. 132–34). There is also a smaller fragment, showing part of the breast and wings. The larger fragment is 1.50 meters high, and it very much resembles three pieces of about the same dimensions which I saw at Öküzli Hissar, the ancient Tyana.[2]

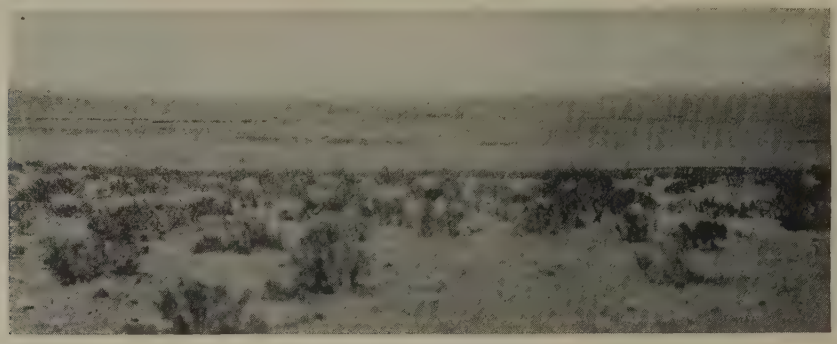


FIG. 127.—UYUZ HAMMAM

A little west of Yerköi the valley of the Delidje Su narrows again, gradually forming a gorge. Four kilometers southeast of Yerköi is a small *hüyük* at Hüyük Köi (Fig. 135). It consists of a rocky hill, overlain by several strata of culture deposits which prove that it was occupied by ancient settlements. The road to Hadji Shefatli leaves the valley at Stambulolu, 8 kilometers farther on, and ascends the steep south slope to the plateau, which slopes gently toward the south, then slowly ascends again. Shortly after climbing the steep slope from Stambulolu, we saw about 500 meters southeast of Akche Koyun a *hüyük* about 10 meters high and 180×185 meters in area. The *hüyük* itself and the surrounding fields are covered with all kinds of pottery fragments, among them that with red slip and specimens of painted ware.

FIG. 128.—UYUZ HAMMAM. SCHEMATIC SECTION

Near the point where the Karajerli Su joins the Konak Su, perhaps 1 kilometer west of Hadji Shefatli, is a very large *hüyük* in the middle of the valley of the Konak Su (Fig. 136). It was originally a natural rocky hill about 30–35

[1] Cf. p. 69.

[2] Small statuettes from Kül Tepe, in the possession of Miss Isabel F. Dodd, in Constantinople, show the same design and treatment of the wings and tail.

meters high, but on its plateau are remains of walls of probably Roman period, and pottery is scattered over the whole *hüyük*. Red-slipped pottery proved that there had been also a "Hittite" settlement here. This *hüyük* is situated at a point very important strategically, as from its top one can see far to the south into the Karajerli Su valley, and eastward even farther, up the Konak Su valley.

FIG. 129.—BULUMASHLÜ

FIG. 130.—BULUMASHLÜ. THE TURKISH HAMMAM

Following the Konak Su eastward we found a small *hüyük* near a mill about 10 kilometers east of Hadji Shefatli. Natives of whom I inquired told me that it was called Chakmak Hüyük. Not far away from the town of Pasha Köi is another *hüyük*, on the south side of the river. At this point the road leaves the actual valley. After crossing the Yozgad-Kaisariyeh road it ascends to a mountain plateau which slopes southward into the here wide and fertile valley of the Konak Su. On this plateau, 1.50–2 kilometers east of Sari Ören, is

another *hüyük*, which is about 8 meters high and 95–100 meters in width and length (Fig. 137). The red-slipped and painted pottery appears very frequently, and also a black kind with surface polished in the same manner as the red-slipped pottery. This kind of pottery I found on nearly all the *hüyüks* of the eastern part of the Konak Su and also on those in the valley of the Karajerli Su.

From the *hüyük* near Sari Ören the road turns to the north and descends toward Dedik in the Konak Su valley. Dedik itself is situated around a *hüyük* (Fig. 138) where also are to be found the previously described types of pottery.[1] Perhaps 2 kilometers northeast of it, near Jamarli, is a very large *hüyük* 18

FIG. 131.—BULUMASHLÜ. THE EMBANKMENT

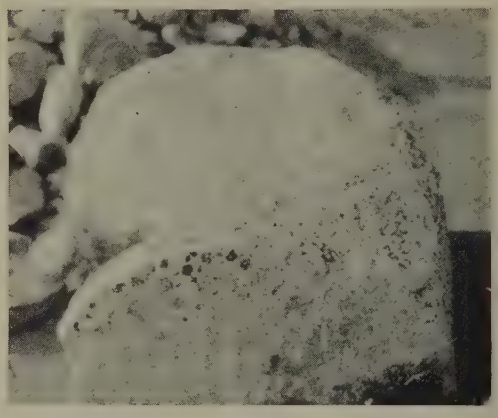


FIG. 132.—BULUMASHLÜ. THE STONE EAGLE

meters high and 210–220 meters in width and length (Figs. 139 and 140). There I collected the three kinds of "Hittite" pottery, besides a few plain pieces which seemed to be of an early period. By the Konak Su eastward, about 2.5 kilometers from Dedik, is situated Orta Hüyük, which E. Chantre had excavated (cf. Fig. 138).[2] Its dimensions are: height, 10–11 meters; diameter, 120–130 meters. There also "Hittite" pottery was collected. Two kilometers farther east was a smaller *hüyük* where "Hittite" pottery appeared on the surface (Fig. 141; cf. Fig. 138).

From the moment when the valley opened eastward after the defile of the Konak Su between Pasha Köi and Dedik, the imposing form of the *sivri* near

[1] E. Chantre, who investigated this region, mentions the presence of seven *tumuli* around Dedik (*Mission en Cappadoce*).

[2] E. Chantre, *op. cit.*, p. 65.

Alishar was to be seen (Fig. 142). North of Alishar we found a most exceptional *hüyük* (Fig. 143). It consisted of an oval terrace with five small elevations around it and a depression on one side leading to its center, from which emerges an elevation about 20 meters high (Figs. 144 and 145). The whole is surrounded by a broad marshy strip which was once probably water. Over this extraordinary *hüyük* great quantities of painted pottery are scattered. I did not observe any more *hüyüks* in this valley, although I am convinced that

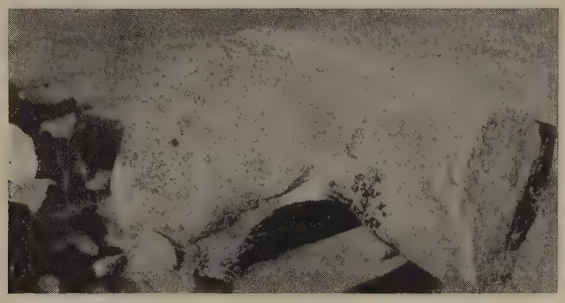


FIG. 133.—BULUMASHLÜ. THE STONE EAGLE

FIG. 134.—BULUMASHLÜ. THE STONE EAGLE.

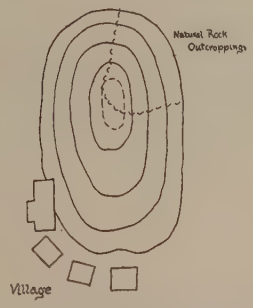



FIG. 135.—HÜYÜK KÖI. PLAN. SCALE, 1:4,000.

there, as well as in the fertile plain sloping gently upward to the north, many more exist.

The *hüyüks* which we saw in the Karajerli Su valley from north to south remain to be enumerated and described. South of the point where the Karajerli Su joins the Konak Su, and not far from Temlik, in a small lateral valley entering from the west, is a large *hüyük* about 16 meters high and 200–250 meters in diameter, covered with red- and black-slipped and painted pottery (Fig. 146). On the mountain bounding this valley to the northeast, nearly opposite the *hüyük* itself, is a nearly circular "arena" formed by an earth wall measuring at

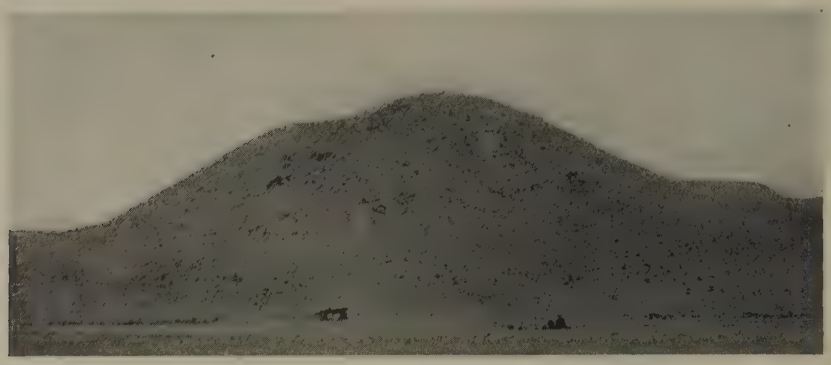


FIG. 136.—THE HÜYÜK JUST WEST OF HADJI SHEFATLI

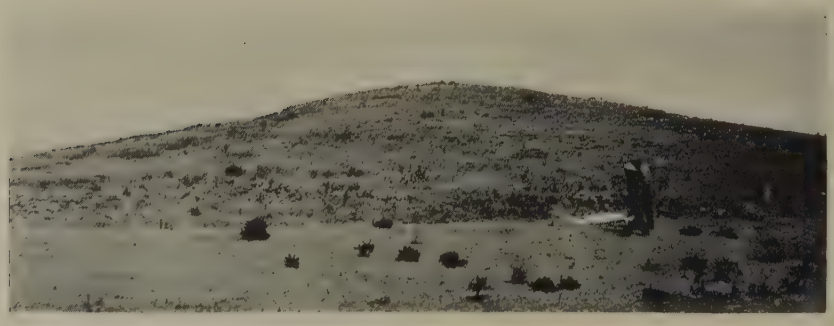


FIG. 137.—THE HÜYÜK NEAR SARI ÖREN

FIG. 138.—THREE HÜYÜKS NEAR DEDIK

the base about 8 meters and in height 2.5–3 meters (Fig. 147). The ground so inclosed is 1.50–2 meters deeper than the actual surface of the plateau. The diameter of this arena is about 160–200 meters. In its center is a small elevation about 6 meters in diameter and about 1–1.50 meters in height. At the south side of the surrounding earth wall is a small *tumulus* (Fig. 148). Not far from

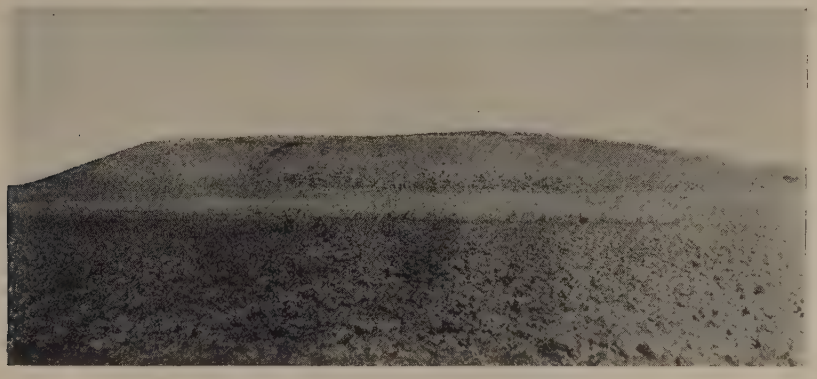


FIG. 139.—THE HÜYÜK NEAR JAMARLI

the small elevation in the center is a shaft now filled with earth and all kinds of pottery. The natives of Temlik say that this is the entrance to a subterranean passage communicating with the Temlik *hüyük*.

It is very possible that this arena was a great camp for troops, which could

FIG. 140.—THE HÜYÜK NEAR JAMARLI. PLAN.
SCALE, 1:8,000.

of course not stay in the city whose remains we must suppose to be in the *hüyük*. It may be that the *hüyük* was a royal residence. The small *tumulus* on the south side speaks also for the military character of the arena. I am inclined to see in it a signal station belonging to a great system covering the main part and communication roads of Cappadocia.

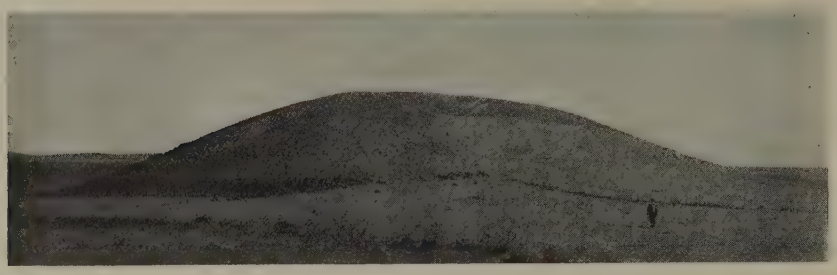


FIG. 141.—THE EASTERNMOST HÜYÜK NEAR DEDIK

FIG. 142.—THE SIVRI NEAR ALISHAR, SEEN FROM THE TERRACE OF THE ALISHAR HÜYÜK.

FIG. 143.—THE ALISHAR HÜYÜK. ITS TERRACE EXTENDS AS FAR AS THE LINES MARKED.

Not far away from Temlik, but on the east side of the river, at Tachirolu, is another *hüyük*. Seven kilometers farther to the south, in a lateral valley east of the river near Kuzaji is a small *hüyük*, and 10 kilometers farther east in the same lateral valley is a larger one. Farther to the south, in the valley of the Karajerli Su, about halfway between Bash Köi and Karasenir, is a large *hüyük*.

Four kilometers southwest of Kandlija, on the west side of the Karajerli Su, is a small *hüyük* about 8 meters high, 100 meters long, and 80 meters wide, which has been partly destroyed in order to furnish material for the construction of the railroad embankment which passes very near this spot. Through the kindness of the Turkish section engineers and the Austrian engineers who are in charge of building this part of the roadbed I had opportunity to investigate the *hüyük* and even to dig there for one day with six workmen whom they courteously placed at my disposal. The *hüyük* is of course nearly destroyed, and the only thing that I could do in so short a time was to have a few cross-sections

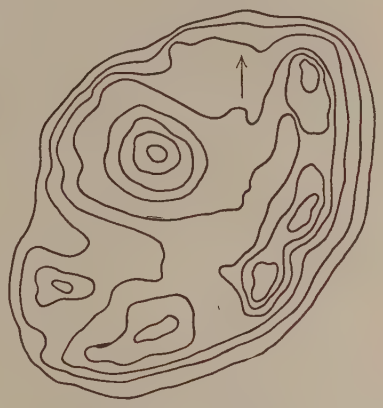


FIG. 144.—THE ALISHAR HÜYÜK. PLAN. SCALE, 1:8,000.

FIG. 145.—THE ALISHAR HÜYÜK. CENTRAL ELEVATION, FROM TERRACE

made in order to discover how many and how thick the different strata were (Fig. 149).

In the middle of the *hüyük*, going nearly through all the strata, are stone foundations. The different strata themselves looked very similar. They each consisted in general, beginning at the bottom, of hard, yellowish earth; then different layers of ashes containing pottery and bones, both human and animal;

then mostly a greasy, gray claylike deposit. Then another layer of yellowish earth would mark the beginning of another stratum. Often, of course, we struck

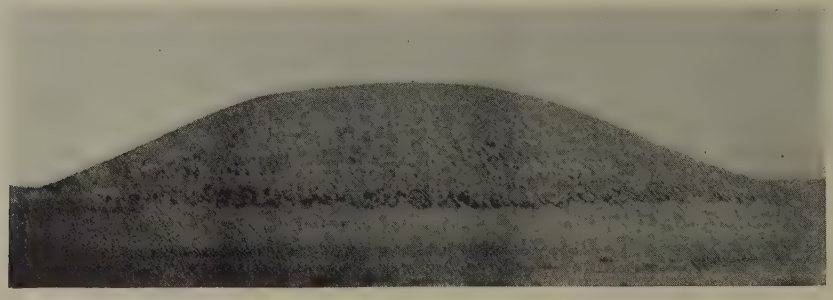


FIG. 146.—THE TEMLIK HÜYÜK

remains of burnt wood. I could distinguish five strata, as follows, beginning with the uppermost:

I. The first stratum, 70–72 centimeters thick (20 centimeters humus), contained unglazed, sometimes very rough, pottery and a few pieces of *terra sigillata.*

II. The second stratum, 100–110 centimeters thick (37–50 centimeters total of

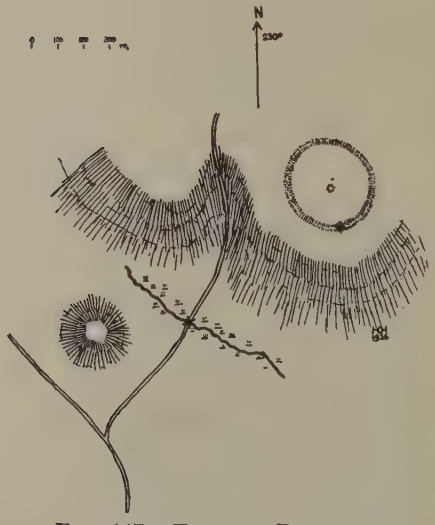



FIG. 147.—TEMLIK. PLAN OF THE HÜYÜK AND ARENA.

FIG. 148.—TEMLIK. TUMULUS WITHIN THE ARENA

different layers of ashes), contained slag of copper, along with unglazed pottery as in the first stratum, but no *terra sigillata.*

III. The third stratum, 90–125 centimeters thick (50–125 centimeters ashes), contained the same sorts of objects as the second stratum.

IV. The fourth stratum, 105–162 centimeters thick (70–80 centimeters

ashes), contained painted as well as plain pottery. In one place we struck the remains of a wall of sun-dried brick (called here *kerpich*). The faces of the bricks were 6×13 centimeters; between them were layers of 2–5 centimeters of yellowish earth.

FIG. 149.—THE KANDLIJA HÜYÜK

V. The fifth stratum seemed to rest on the original surface of the valley. It contained thick layers of ashes, painted pottery, and pottery with red and with black slip. In this stratum a burial had been found in a stone cist with very primitive pottery and a bronze bracelet (Fig. 150). We could not discover what had been the posture of the body.

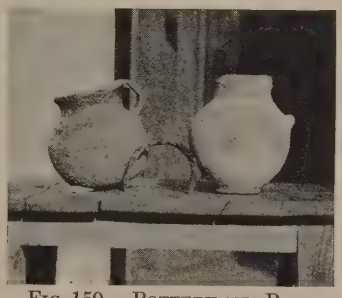


FIG. 150.—POTTERY AND BRACELET FROM A BURIAL IN KANDLIJA HÜYÜK.

Further investigation of the upper strata would have been fruitless on account of their advanced stage of destruction; and excavation in the fifth, nearly untouched, stratum could not be made, as it forms the foundation of the roadbed.

About 6 kilometers east of this *hüyük*, in a side valley near Saush, stands a small *hüyük*. A few kilometers southeast, in the valley of the Karajerli Su

itself, is another one. At Karafakeli we saw two *hüyüks*, one large and one small. A small hill, uninvestigated by us, at the north entrance of the town may be a small *hüyük* or a very large *tumulus* (Fig. 151). About 1 or 2 kilometers southwest of Karafakeli is another *hüyük*. Two or three kilometers farther, near the railroad track and near Eski Ören, is a medium-sized one. Halfway

FIG. 151.—HÜYÜKS AT KARAFAKELI

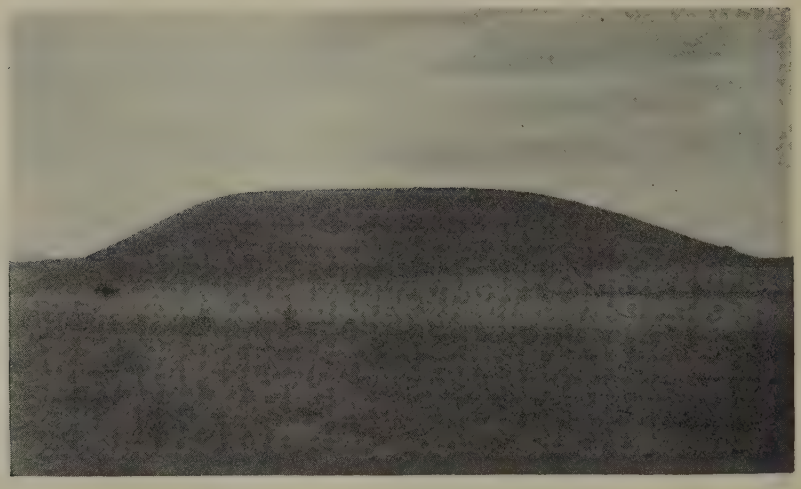


FIG. 152.—THE HÜYÜK NEAR DÜVEL KÖI

between Almalü and Düvel Köi, in the very middle of the high plateau between the Karajerli Su and the Küzül Irmak valleys, is a *hüyük* about 15 meters high and 150–180 meters wide (Fig. 152). Fragments of painted pottery and of pottery with red and with black slip are scattered all over the ground.

At this moment it is not possible to say anything more precise or detailed concerning these *hüyüks*. Perhaps the historians working on the cuneiform

texts from Boghaz Köi will bring out some suggestion as to the identity of one or another of them with a city or town named in these inscriptions; but nothing definite can be said about them until at least a few have been opened.

It is by no means to be hoped that remains of cities will be found in all of these *hüyüks*. It is more than probable that many of them were merely small towns or villages. But it is very important that one or more should be excavated systematically in order to get at least a reliable relative chronology for the different kinds of pottery and to furnish us, in the meantime, with archaeological material illustrating the "Hittite" culture in this region, which material has until now been utterly lacking.[1]

[1] The excavations conducted by E. Chantre at Orta Hüyük near Dedik seem not to have been recorded systematically; and the results of Professor F. Hrozný's excavations at the Kül Tepe northeast of Kaisariyeh have not yet been completely published.

## HÜYÜK, BOGHAZ KÖI, AND YAZILI KAYA

In the course of our expedition we visited Hüyük twice, the first time coming from Yozgad via Aladja on our way to Boghaz Köi, where we stayed several days to study the monuments of Yazili Kaya and to trace an ancient road southward. The second time, coming from Chorum on our way to Angora, we stayed at Hüyük two days to investigate the Kara Hissar, a mountain not far away from it, and the *tumuli* in the neighborhood (Figs. 153 and 154).

Hüyük, like Boghaz Köi and Yazili Kaya, is among the "Hittite" sites in Asia Minor which have been longest known, and the sculptures from there have often been published; but unfortunately no complete publication is yet available. It has also been partly excavated by Th. Macridy Bey, and it is to be hoped that the results will soon be in print, as they will surely throw light on many interesting problems.[1]

One of the famous sphinxes there has been thrown over and now lies broken on the ground (Figs. 155–57). The reliefs have been carried to a place outside the village and are exposed to rain and wind or the fancy of the native children (Figs. 158–62). Three smaller pieces have been taken to Boghaz Köi, where they are lying in the courtyard of the old expedition house; others have gone to Angora (cf. Fig. 11). It is probable, and is earnestly to be hoped, that all these sculptures will soon be placed in the new museum at Angora.

Among the many interesting finds at Hüyük are Phrygian inscriptions, two on single stone slabs, one on the body of a huge, seemingly unfinished stone lion (Plate VII), and one on the back of a sculptured dado slab. During our second stay at Hüyük we investigated the top of the Kara Hissar, where we saw a two-line Phrygian inscription on an altar cut in the living rock.[2]

The bare, isolated, double-peaked rock of the Kara Hissar, called also Kaleh Hissar, is situated northwest of Aladja, 5 kilometers north of Hüyük (Fig. 163). It consists of grayish porphyry, and the material used for the sculp-

[1] The best description of Hüyük is given in Perrot and Guillaume, *Exploration archéologique de la Galatie et de la Bithynie*, and Perrot and Chipiez, *Histoire de l'art*, IV (1887), 656–86. For a report on a preliminary excavation by Th. Macridy Bey, see "La porte des sphinx à Euyuk," in *MVAG*, XIII (1908). A complete report on his later excavations will probably appear this year. Good illustrations of the sculptures are few. Cf. also Ed. Meyer, *Reich und Kultur der Chetiter*, Figs. 9, 12, 61–65; Humann and Puchstein, *Reisen in Kleinasien und Nordsyrien*, Plate VII; E. Chantre, *Mission en Cappadoce*, pp. 1 ff.; J. Garstang, *The Land of the Hittites* (London, 1910), pp. 242–70.

[2] On the site see Humann and Puchstein, *op. cit.*, p. 82, and Anderson in *Studia Pontica*, I, 21. The inscription is referred to by E. Huntington in *Zeitschrift für Ethnologie*, XXXIII (1901), 205, and by W. Belck, *ibid.*, *Verhandlungen*, p. 476.

tures at Hüyük comes from there. A huge rectangular block still lies not far from the place where it was quarried. The rock rises about 150 meters out of a little plain surrounded by high hills. It is nearly conical, the slopes being here and there as smooth as though polished (Fig. 164). At its base are the ruins of three buildings of probably Seljuk origin (Fig. 165), and on the saddle between the two peaks are remains of walls of the late classical period. In the references will be found a few notes concerning them, but I will not deal here with these remains.

FIG. 153.—HÜYÜK AND VICINITY. MAP. SCALE, 1:300,000.

One peak, which is broader and lower than the other, is in part artificially flattened (Fig. 166). On it I found the remains of the Phrygian altar (Figs. 167–70). It consists of a large stone bench with a high back surmounted by the remains of two crouching lions, all cut out of the native rock (Plate VIII). At one side a path cut in the rock leads from the flattened summit of the peak, and down the slope are to be seen a few groups of three or four steps much worn and badly preserved. On the other side of the bench is the real altar, likewise cut out of the native rock. It consists of three narrow steps with risers slanting backward like saw teeth. The two-line Phrygian inscription is cut on the riser of the top step. Its tread forms a leveled space, from which in turn rises a small platform from the center front of which a large rectangular section has been removed. At each side of the recess an armlike projection extends downward and across the leveled space below. At the back of the platform is cut a "stela." The whole is of course very much weathered and covered with lichens. Lack of time made it impossible for me to clean and copy the inscription. To make a squeeze would have necessitated special preparations, as the water has to be carried to the top—a difficult task. Similar altars are known in Phrygia proper and have been described frequently.[1]

On the mountains surrounding the southern edge of the plain in which Kara

[1] E. Brandenburg in *Abhandlungen der historischen Klasse der K. Bayerischen Akademie der Wissenschaften*, XXIII (1906), 694–98.

Hissar stands are four large *tumuli* and one smaller, unfinished one (Fig. 171; cf. Fig. 153). They are probably burial mounds (Fig. 172). At each end of this chain of *tumuli* were two more smaller but broader ones. From the fifth *tumulus*, the one at the east end, I could see another at the entrance of the gorge leading from Chorum to Aladja; another farther north, situated on the summit of the mountains of the same valley where the road turns in coming from Chorum southward; and finally a third one, on an outstanding mountain south of Hüyük. From the broad *tumulus* at the west end one could see about four other *tumuli* toward the northwest and west, besides the one south of Hüyük. There is no doubt that these *tumuli*, in contrast with the five first mentioned,

Fig. 154.—Hüyük. General View

belong to the signal system which covered the greater part of Cappadocia. Along the valley of the eastern part of the Delidje Su, on the height of the slope as well as on outstanding mountains of the region north and south of this river, such rather flat *tumuli* were visible. And always one could see from each of them at least two or three of the same size and one larger one on an outstanding mountain. Furthermore, especially along the Delidje Su, they are arranged in such a way that they cover the whole valley, although it winds sometimes in very pronounced curves. It does not seem very likely that all these *tumuli*, dispersed over such a large territory and situated far away from one another in places often very far from ancient settlements, could be burial mounds. *Tumuli* which are burial mounds are mostly arranged in groups, as at Gordium, Angora, Samsun, and Hüyük.[1] Furthermore, burial *tumuli* are proportionally higher and have a smaller base than most of the *tumuli* dispersed with such seeming irregularity over Cappadocia. The only reasonable explanation, therefore, for

[1] The ones described at the beginning of this paragraph.

this type of *tumuli* is to suppose them to be posts of a signal system of the great Hittite Empire, required as a part of the highly developed military organization by which the rulers of that empire maintained their supremacy.

Boghaz Köi is situated 28 kilometers southeast of Hüyük at the south end of the broad and fertile valley of the Budak Özü Chai (Fig. 173). The ancient

Fig. 155.—Hüyük. The Sphinx Gateway

city occupies a mountain slope bounded on two sides by gorges in which flow two small streams that unite near the modern town. The excellent natural situation is reinforced by very carefully planned walls which form a highly developed system of defense. Boghaz Köi also has been partly excavated. The publication of the architectural remains, including the fortifications, appeared as early as 1912; a second volume, dealing with the smaller objects and ceramics, will appear soon. The main find consisted of cuneiform tablets from the state

archives of the Hittite Empire.[1] Fragments of such tablets can still be found there, especially among the east chambers of the lower palace and at the foot of the Büyük Kaleh.

In badly weathered cases lying in the courtyard of the expedition house are a few large water vessels and the warrior relief from the "king's gate," besides three reliefs from Hüyük waiting to be taken to the museum at Angora.

Fig. 156.—Hüyük. The Sphinx Gateway

Natives told me that in the spring traces of an ancient road leading toward Yükbash and from there toward Hüyük are recognizable by the different coloring and height of the grass in the pastures. From the same people I heard also

[1] See on the architecture *Boghasköi, die Bauwerke,* von O. Puchstein, unter Mitwirkung von H. Kohl und D. Krencker (*Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft,* No. 19). The tablets are now being published by the Vorderasiatische Abteilung der Staatlichen Museen zu Berlin under the title *Keilschrifturkunden aus Boghazköi* (1921——), continuing Nos. 30 (1916) and 36 (1921) of the before-named D. O.-G. series, in which also two volumes, Nos. 41–42 (1922–26), appeared in transcription. The hieroglyphic inscription at Boghaz Köi is well published by Benson B. Charles, "Hittite Inscriptions," *Travels and Studies in the Nearer East,* Vol. I, Part II (Ithaca, N.Y., 1911), Plate 3 and pp. 7–10.

of another ancient road leading to the south toward Büyük Nefez Köi, the ancient Tavium.[1]

From Boghaz Köi the deeply incised, narrow valley limiting to the west the plateau on which the ancient city is situated leads upward toward the mountain slope south of the modern village. About 1 kilometer from the town one sees the remains of a small group of ancient buildings so destroyed that their plan could not possibly be rec-

FIG. 157.—HÜYÜK. THE FALLEN SPHINX

FIG. 158.—HÜYÜK. BAS-RELIEFS

[1] For the identification, see *Studia Pontica*, I, 19.

ognized without digging; but the great number of partly worked stones proves that there have been buildings, or at least a post, guarding the en-

FIG. 159.—HÜYÜK. BAS-RELIEF

FIG. 160.—HÜYÜK. BAS-RELIEFS

trance to the valley (Fig. 174). The ascent is very steep and difficult until one reaches a terrace-like formation where a small village is situated. Here one sees for the first time the traces of a great ancient road paved with rather large, irregular stones between borders of huge, nearly rectangular

FIG. 161.—HÜYÜK. BAS-RELIEF

ones. From the terrace the modern road in many curves again ascends the steep slope, intersecting about three or four times the ancient one, which has been partly washed away by torrents. Before the road reaches the watershed there is another terrace-like formation, covered with fresh green grass and such

FIG. 162.—HÜYÜK. BAS-RELIEF

shrubs as clothe the slope. After passing the first terrace, scattered trees also appear (Figs. 175 and 176). On the second terrace the ancient road is fairly well preserved. Measurements taken here show an average width of about 6 meters. There are also the remains of another ancient building.

The mountain slopes gently upward now until the road reaches the watershed, the actual summit of the mountain chain, which consists of several parallel ridges (Fig. 177). Their crests are more or less covered with shrubs, the slopes and valleys between them being bare except for patches of steppe grass. An interesting feature is that at every point where the ancient road reaches the crest of such a ridge there appear the remains of ancient buildings, consisting mostly of small elevations covered with stones, some of which show human handiwork, and with a special kind of bushy grass which appears in no other

Fig. 163.—Kara Hissar

places (Figs. 178 and 179). The road then starts to descend southward. Though this south slope is not as steep as the north one, it is more torn and irregularly divided. In addition, the sides of the torrent valleys, dry now and containing water during winter and spring only, are bare and sandy.

Near the rather large village of Tambassan this landscape changes to a more gently undulating slope covered with grass and in the valleys even showing small groups of trees. A special feature of this slope is its series of steplike formations. Near the edge of each terrace, judging from two instances which I observed (Figs. 180 and 181), remains of buildings are again to be seen near the ancient road. On the second "step" from Tambassan, before the modern road

descends toward Bajili, the ancient road forks. The main road seems to follow the valley leading toward Bajili; the branch stays at the height of the terrace for about $3\frac{1}{2}$ kilometers more, then follows another valley southward to Büyük Nefez Köi. This last part of the ancient road is very badly preserved, and the road itself in the preserved places is narrower than before. Probably

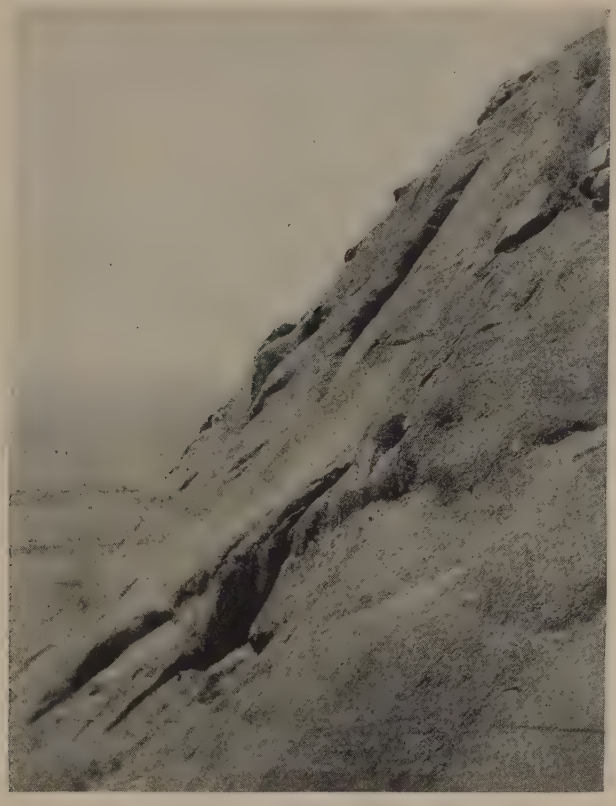


Fig. 164.—Kara Hissar. The Slope

the main road follows the valley toward Bajili and then swings around the end of the mountains toward the west, where it also probably reaches Nefez Köi. Beside the branch, just before it descends into the valley, were again to be seen the remains of a building. This time the foundations were still recognizable. They consisted of irregular stones carefully put together without mortar (cf. Fig. 181).

Near Nefez Köi are two isolated natural hills with the remains of a great ancient settlement (Figs. 182 and 183). This is generally believed to be the

Roman Tavium. Over the two hills and especially in the modern town and its cemetery are scattered a great number of architectural remains of this period (Plate IX), such as fragments of columns, very well sculptured architraves, and inscriptions, while the surface of the hills is covered with a great quantity of pottery, mostly *terra sigillata*. On one spot between the two hills I collected also a few pieces of pottery with red slip. On the summit of the mountain behind Nefez Köi are two *tumuli* from which one has a splendid view, especially eastward over the mountain system east of the valley. Far in the dim distance are

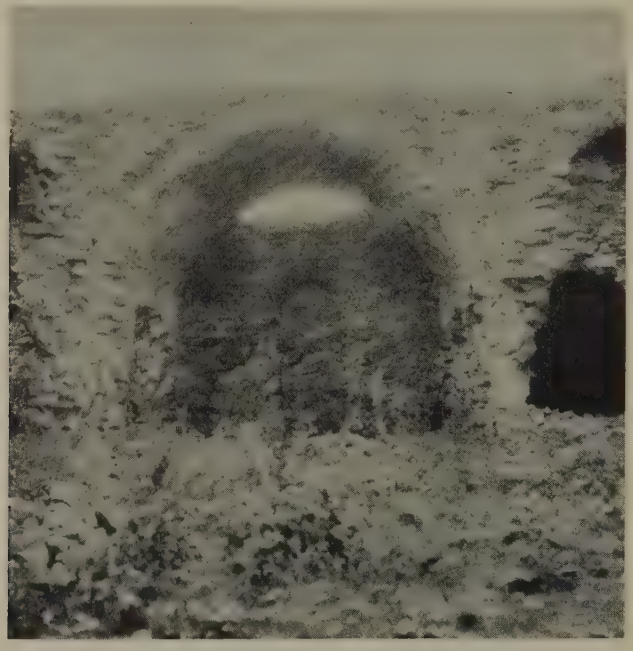


FIG. 165.—KARA HISSAR. RUINS AT FOOT

visible the two *tumuli* situated on the Koch Tashak. On the other side of the valley, facing these *tumuli*, are one or two more.

Looking northward one can see also the *tumulus* south of Tambassan on an elevation not far from the point where the road forks. A little southwest of Nefez Köi, shortly before Altükara, are the remains of a rather large classical building (Fig. 184). On the way back I followed from Nefez Köi a small gorge leading up the slope east of the ancient road, which I reached after climbing the summit of this terrace. In this gorge I noticed three small rectangular caves so arranged that each could always be seen from the next one. Since on the

slope of the mountain behind Nefez Köi there are a great number of such caves, more or less irregular in shape and of uncertain period, I do not know whether any special significance attaches to them or not.

We know that a Roman road is supposed to have led northward from Tavium. The before-described road is quite certainly to be identified with it; but, considering its unusual width, it is probably to be considered an ancient "Hittite" road leading southward to the valley of the Delidje Su, still used in classical times. An attempt to find the continuation of it southward, which I

FIG. 166.—KARA HISSAR. THE LINE POINTS TO LOCATION OF PHRYGIAN ALTAR.

made together with Dr. Forrer and Professor Weigand, entering the valley from the south as we were coming from Yerköi to Yamuklar and Hattibin Köi, failed unfortunately since we had not enough time at our disposal to investigate carefully the whole valley, which is very difficult to survey.

Over the mountains which shut in the valley of the Budak Özü Chai northeast of Boghaz Köi are scattered a number of rock exposures (Fig. 185). One of them (Fig. 186), situated at the foot of the ridge about 2 kilometers northeast of Boghaz Köi, is the famous Yazili Kaya ("inscribed stone"). The limestone forms two natural courtyards, which are decorated with bas-reliefs cut in the living rock (Plate X). These have been known for a long time and have been published, but mostly in an unsatisfactory way. The representations have

FIG. 167.—KARA HISSAR. THE PHRYGIAN ALTAR

FIG. 168.—KARA HISSAR. THE PHRYGIAN ALTAR

been subject to many interpretations and descriptions.[1] Casts have been taken of some of the sculptures.[2]

FIG. 169.—KARA HISSAR. THE PHRYGIAN ALTAR

FIG. 170.—KARA HISSAR. THE PHRYGIAN ALTAR. SKETCH

[1] Perrot and Guillaume, *Exploration archéologique de la Galatie et de la Bithynie;* Humann and Puchstein, *Reisen in Kleinasien und Nordsyrien*, pp. 55–71; Garstang, *The Land of the Hittites* (London, 1910), pp. 211–41. For interpretations, see also Ed. Meyer, *Geschichte des Altertums*[3], Erster Band, 2. Hälfte, §§ 478–80, and *Reich und Kultur der Chetiter*, pp. 85–102.

[2] Humann (cf. *op. cit.*) took eleven casts of figures from there, corresponding to Nos. 29, 30, 35, 37, 38, 39, 43–47, the hieroglyphic signs before Nos. 48 and 49, the cartouche and head of No. 65, a group of warriors from the bas-relief in the small courtyard (Nos. 68–79), Nos. 81 and 82.

Altogether there are at Yazili Kaya representations of eighty-two figures (Fig. 187). The first thirteen figures, twelve of them running men, each with high conical headdress and short skirt, and one with a conical headdress but a long robe, are very much worn (Plate XI A). Of the following three (Nos. 14–16), No. 14 has almost completely disappeared (Plate XI B), like the first two

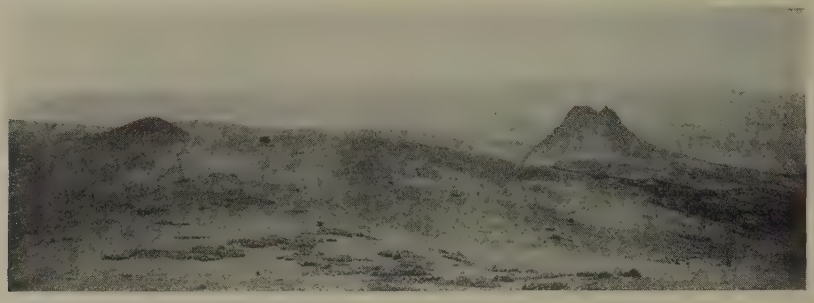


Fig. 171.—Tumuli near Hüyük. Kara Hissar at Right

Fig. 172.—One of the Large Tumuli near Hüyük

figures of the next group (Nos. 17–25, Plate XII A). Of the group numbered 26–34, Nos. 29 and 30 are especially interesting. They show two smaller figures with horns, standing on some object and holding above their heads a crescent-shaped object (Plate XII B). The group 35–40 shows six different types of figures. First comes a personage in a long robe and a round cap, as in No. 65, but with a winged disk above the head. Then follow a winged figure with a short skirt, two figures with long, flowing robes, a second winged figure with conical headdress and long garment, and finally a figure with short skirt, conical headdress, and a club held in one hand (Plates XIII and XIV A).

FIG. 173.—BOGHAZ KÖI

FIG. 174.—RUINS SOUTH OF BOGHAZ KÖI

FIG. 175.—THE ANCIENT ROAD SOUTH OF BOGHAZ KÖI. THE TUFTS OF VEGETATION IN FOREGROUND ARE PECULIAR TO ANCIENT RUINS.

FIG. 176.—THE ANCIENT ROAD AGAIN

FIG. 177.—MOUNTAIN RIDGES CROSSED BY THE ANCIENT ROAD

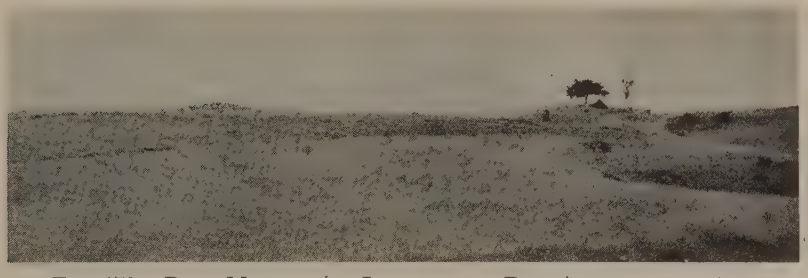


FIG. 178.—RUIN MOUNDS (AT LEFT AND AT RIGHT) ALONG THE ANCIENT ROAD. THE ROAD ITSELF COMES INTO VIEW AT THE RIGHT.

FIG. 179.—A WROUGHT STONE FROM BESIDE THE ANCIENT ROAD

The whole representation in the great court seems to show two processions meeting in the large central relief. This consists of seven figures (Nos. 41–47)

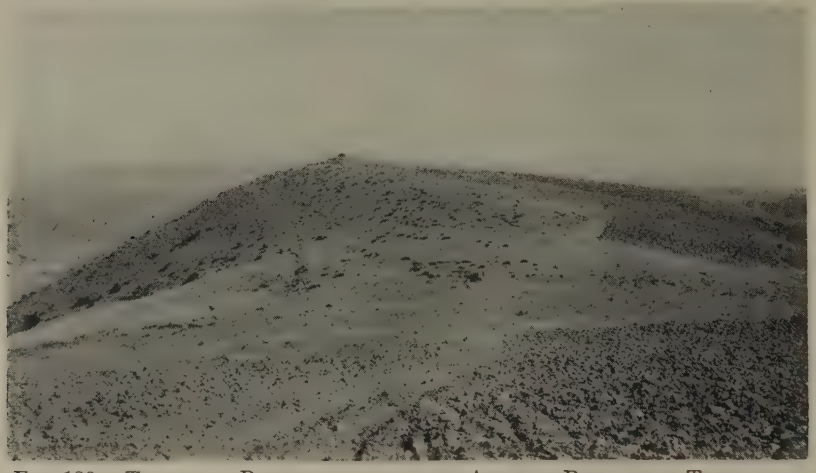


FIG. 180.—TRACES OF BUILDINGS ALONG THE ANCIENT ROAD NEAR TAMBASSAN

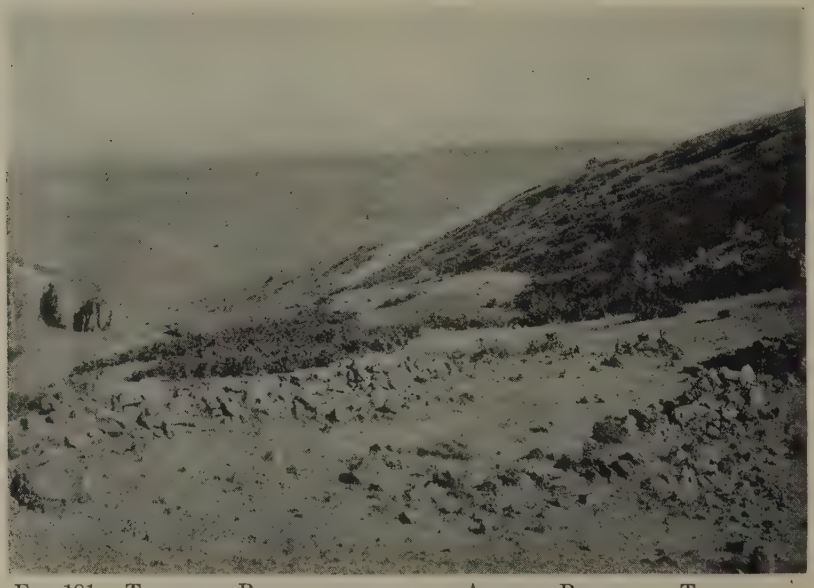


FIG. 181.—TRACES OF BUILDINGS ALONG THE ANCIENT ROAD NEAR TAMBASSAN

three belonging to the group coming from the west side, the remaining four belonging to the group coming from the east (Plates XIV B and XV). The western procession is headed by a large figure of a god with conical cap, who

FIG. 182.—ONE OF TWO NATURAL HILLS NEAR BÜYÜK NEFEZ KÖI

FIG. 183.—THE OTHER NATURAL HILL NEAR BÜYÜK NEFEZ KÖI

FIG. 184.—AN ARCHITRAVE FRAGMENT NEAR ALTÜKARA

stands on the bowed backs of two smaller figures wearing the same headdress as the two figures Nos. 17 and 18. Seemingly represented as standing beside him appears the front part of a jumping animal which also wears a conical headdress. The left hand of the god is extended toward a goddess approaching

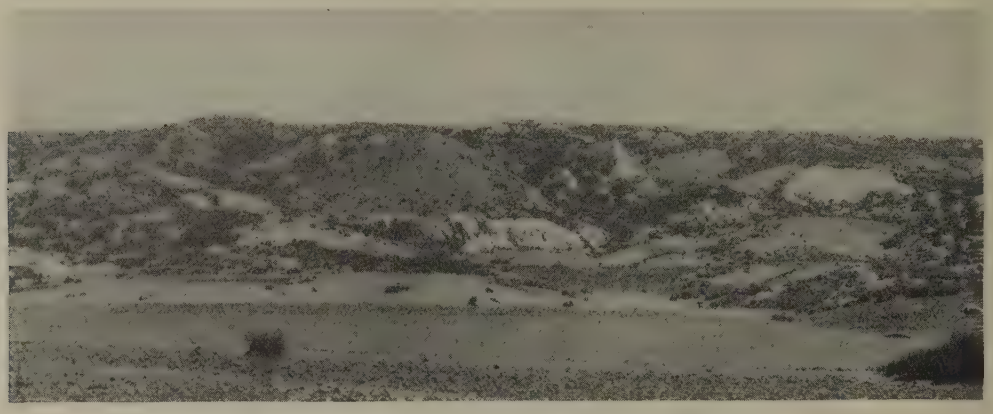


FIG. 185.—THE SITUATION OF YAZILI KAYA (IN CENTER)

FIG. 186.—YAZILI KAYA. GENERAL VIEW

from the east, who stands on the back of a lion or panther. She wears a cylindrical hat and a long, flowing garment. In her outstretched hand she, like the god, holds a symbol; and beside her also appears the front part of an animal with conical headdress. Behind her stands a smaller figure of a god with conical headdress and short skirt. He too stands on a panther or lion, while another symbol appears before him. The last two figures, with cylindrical headdresses

and long, flowing robes, are standing on a double-headed eagle. The remaining figures of the eastern procession (Nos. 48–64, Plate XVI), are all more or less alike, with the exception of No. 56, whose robe seems to be draped in another fashion (Plate XVI A, at right). Before Nos. 48 and 49 appear a few signs of hieroglyphic writing. No. 65 is a single relief showing a figure in long garment and round cap standing on two mountains, represented in the same conventional way as on seals (Plate XVII). Over his outstretched hand appears a "cartouche" similar to relief No. 80 in the small courtyard.

Two reliefs, one on each side (Nos. 66 and 67), flank a rift (Plate XVIII A) leading back to a narrow inner court. Both show human figures with animal heads (Plates XVIII B and XIX A).

The inner court, also called the sanctuary, has four groups of sculptures, one (Nos. 68–79) showing the same motive as the group Nos. 1–12, but much better executed (Plates XIX B and XX). On the other side is a relief (No. 80, Plate XXI) showing a "cartouche" similar to that which forms part of No. 65. The last two reliefs (Nos. 81–82) are especially interesting (Plate XXII). First comes the so-called "sword idol." It consists of four symmetrically arranged lions, over them a human head with conical cap. The ensemble forms a "handle" from which a sword blade extends downward. The final relief (No. 82) shows a huge figure with short skirt and conical headdress. He holds in his arms a smaller figure dressed like No. 65. Behind his head appears a "cartouche," but this time not with a figure in its center but with an oval object. In this inner court are also three rather crudely executed niches.

Fig. 187.—Yazili Kaya. Plan

The whole monument is of an extraordinary kind. Its interpretation is still one of the many unsolved problems of "Hittite" archaeology.

## A CLIFF TOMB NEAR OSMANJIK

Osmanjik is a large town situated on the bank of the Küzül Irmak about 200 kilometers northeast of Angora. At this spot the Küzül Irmak changes its northeasterly direction, turning at a sharp angle to the northwest. The valley itself is here wide and fertile. The town is situated at the foot of a steep cliff which bears the remains of a big Seljuk castle probably rebuilt on the remains of a Byzantine one (Fig. 188). A few irregular cave entrances are to be seen on the face of this cliff. In the town itself are various remains of the Seljuk period, among them a mosque, some inscriptions, and, in the cemetery, a marble slab showing a conventionalized peacock and palm tree and a short inscription in Arabic characters (Plate XXIII A). East of the town, emerging from the level of the valley, are a few high cliffs of picturesque aspect.

FIG. 188.—OSMANJIK

In the cliff rising south of the main road, about 1 kilometer east of the town, is a tomb situated about 12 meters up the nearly vertical face of the rock. An incised path about 60 centimeters deep, very irregularly cut, leads to it, ascending at an angle of about 29 degrees (Fig. 189). Another such path, running parallel to the first, appears about 2 meters under it, passing below the tomb and leading toward the summit of the cliff.

The tomb itself consists of a large anteroom connected by a narrow entrance with a small chamber (Fig. 190). The anteroom (5×3 meters) is supported by a pillar so nearly destroyed that it appears very crudely and carelessly worked in contrast to the even and sharply angled room itself. The small passage leading to the second room is only 1.30 meters high and .95 meter wide. The inner room (4×2.5 meters) has at its back wall a stone bench 2 meters long, 1 meter wide, and 1 meter high from the floor. There are no other traces of human

FIG. 189.—CLIFF TOMB NEAR OSMANJIK

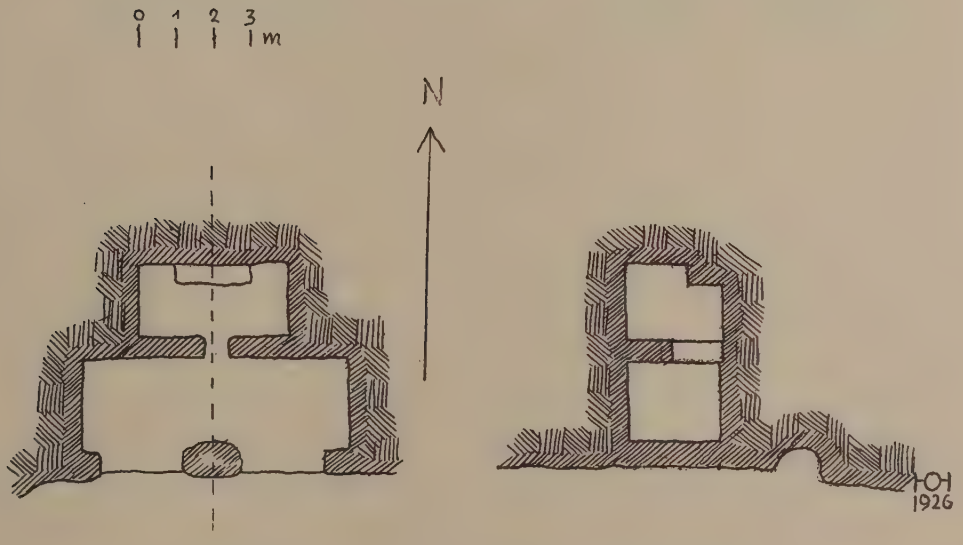



FIG. 190.—CLIFF TOMB NEAR OSMANJIK. PLAN AND SECTION

handiwork in this tomb. The whole monument is rather plain and does not show any particularly interesting features.

The situation of Osmanjik is a very important one, as it is at the junction of the great road leading from Merzivan to Kastamuni and the road coming northward from Chorum. The road leading to the east enters a defile not far from Osmanjik and follows the valley of a small tributary of the Küzül Irmak. This narrows more and more until it becomes a real gorge, opening then again slowly to the east toward the fertile plain in which Hadji Köi and Merzivan are situated. Along this road I observed five small rectangular caves about halfway up the slope of the valley or gorge at more or less strategical points. That means they are situated in places from which a large part of the road in each direction would be visible. It is not yet possible to attribute them to any particular culture or even to define their meaning with certainty; but their situation in such places as just described suggests observation posts for controlling the road connecting the settlement (important even in ancient times) at or near Osmanjik with the settlements in the plain of Merzivan.

## THE *KALEHS* WITH TUNNELS

Twenty kilometers south of Chorum the Chorum Chai, leaving the fertile plain on the northeastern corner of which Chorum is situated, enters a narrow valley between the mountain chains of the Kara Dagh and the Saruluk Dagh. The entrance is a defile between two tower-like rocks emerging from the general line of the valley slope on each side (Fig. 191). One of these natural towers, the one on the north bank, has been fortified. The huge rock face drops almost vertically toward the valley; its only connection with the general slope of the valley is a small saddle (Fig. 192). On this saddle are still the remains of an ancient wall

FIG. 191.—DEFILE SOUTH OF CHORUM

(Fig. 193). Groups of three or four narrow steps cut in the native rock, irregularly dispersed over the slope, lead toward the summit. Halfway to the top, a narrow rock-cut path leads toward a small, carefully worked tunnel entrance. At a slope of 45 degrees steps lead down toward the foot of the rock. The vault is carefully smoothed. The steps are of course much worn, and after 33 steps the tunnel is filled up with stones and earth (Fig. 194). The entrance itself, blocked by two huge rocks, measures 2.50 meters in height and 1.75 meters in width. Not very far from it a circular shaft (Fig. 195) 1.50 meters in diameter and 2 meters deep leads to a similar vaulted tunnel, the steps of which form a slight curve. This tunnel is filled after 36 steps (Fig. 196). Not far from the summit is the entrance to a third, very large tunnel (Fig. 197). It is 3 meters wide and 3.60 meters high, and again steps lead downward; after 33 steps it is filled up.

The summit of the rock itself is transformed to an artificial platform with a huge stone terrace (Fig. 198). A few rectangular holes suggest that there may

have been also a wooden construction. In two or three places, where the natural formation of the rock permitted, small platforms or terraces had been cut, and on some of them a few remains of walls are to be seen. Pottery fragments are scattered all over the place, but I did not find any examples of a definite type.

Fig. 192.—The Kaleh South of Chorum (at Left in Fig. 191)

In a similar situation we found, near the small town of Gönnenjik south of Amasia, another rock *kaleh* with three tunnels. South of Amasia the Yeshil Irmak receives the Chekerek Irmak, which, before uniting with the Yeshil Irmak, flows through a broad and very fertile plain. At the south end of this plain the Chekerek Irmak receives the Chorum Chai. Twelve kilometers above where the Chekerek Irmak enters this plain from the south, Gönnenjik is situated on the west slope of the valley, and not far from it is the large rock tower called Gökchali Kaleh (Fig. 199). Gökchali Kaleh slopes down on all sides nearly vertically; only from the southeast is it possible to climb up, with a few ancient rock-cut steps showing the way. One then reaches a natural terrace 15–20 meters in width, the actual summit rising behind it. At the south end of this terrace a small tunnel 1.50 meters

Fig. 193.—The Kaleh South of Chorum. Ancient Wall Protecting Approach

high and 1.10 meters wide leads downward. After 37 steps it is filled with rubbish (Figs. 200–202). In the middle of the terrace a second, very large, tunnel, 3.50 meters high and 2.80 meters wide (Figs. 203 and 204), its entrance

very carefully cut and smoothed, leads down diagonally through the whole rock to its base on the opposite side. Midway occurs a horizontal platform 2 meters long, with a depression at one side. From end to end the tunnel measures 55 meters. Not far from the exit of the large tunnel, a small entrance to a third tunnel is hidden behind a few large stones. After 5 meters, this third tunnel divides into two branches. One, continuing in the same direction, is soon filled. The other starts to ascend and continues for nearly 12 meters before a few huge stones fill it up. I think there is no doubt that this branch of the third tunnel once led to the second tunnel,

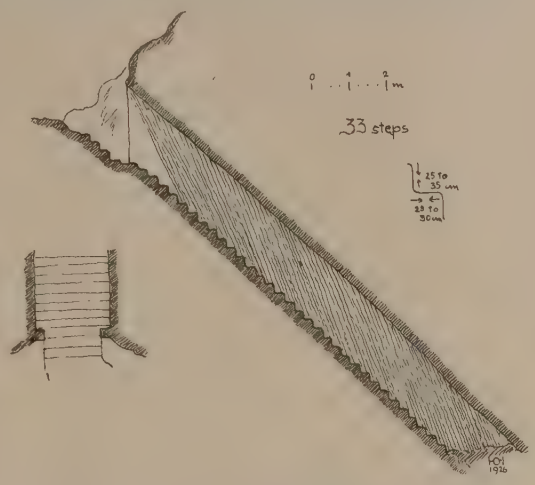



FIG. 194.—THE KALEH SOUTH OF CHORUM. THE FIRST TUNNEL. PLAN AND SECTION.

FIG. 195.—THE KALEH SOUTH OF CHORUM. MOUTH OF SHAFT LEADING TO SECOND TUNNEL

striking it at the point where a depression is still to be seen in the floor of the small platform. After a very careful study of the back of the rock we found, perhaps 3 meters above its base, an irregular hole which was probably the exit to the first tunnel.

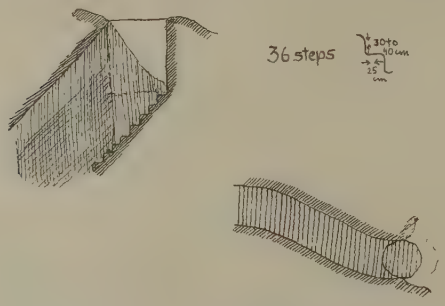



FIG. 196.—THE KALEH SOUTH OF CHORUM. THE SECOND TUNNEL. SECTION AND PLAN.

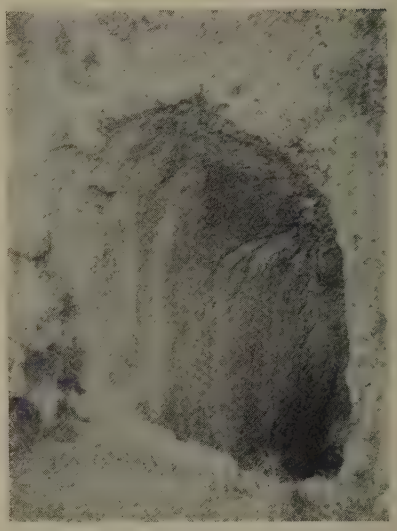


FIG. 197.—THE KALEH SOUTH OF CHORUM. THE THIRD TUNNEL. ENTRANCE.

But it was filled from above, so that it was not possible to follow it. Only the vault and three or four steps could be recognized.

On the rock terrace, now covered by thick scrub, pottery fragments are scattered in abundance. On the summit of the rock two fairly large stone terraces similar to that at the Chorum *kaleh* have been artificially created.

A third rock castle of the same type was encountered 6 kilometers south of Tokat in the narrow valley of the Tokat Su. On each side of the river is a towering cliff showing traces of artificial

FIG. 198.—THE KALEH SOUTH OF CHORUM. PLATFORM ON SUMMIT.

fortification (Figs. 205 and 206). The larger and more important is situated on the east side. These cliffs were known already, and F. Cumont calls the larger one Horosh Tepessi.[1] I was told that it was called Bairam Tepe. On its summit are the remains of walls of a late period. A rock-cut path, alternating with steps, leads toward the summit. Besides a large rectangular water-basin and a flask-shaped rock-cut cistern, there are two tunnels and two tombs in the cliff. The first tunnel is very remarkable for its dimensions and its execution (Fig. 207). A broad stairway, 3.15 meters wide, leads downward about 18 meters to the vaulted entrance (about 4 meters high). On both sides, 2.5 meters above the level of the main stairway, is a second stairway 50 centimeters in width. One hundred seventy-four steps can still be counted, after which the tunnel is filled with stones and earth. Not far from it is the entrance to a second, smaller tunnel, blocked by a huge stone (Figs. 208 and 209). It is 1.80 meters high and 1.50 meters wide;

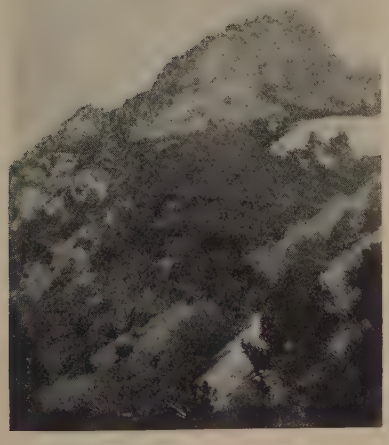


Fig. 199.—Gökchali Kaleh

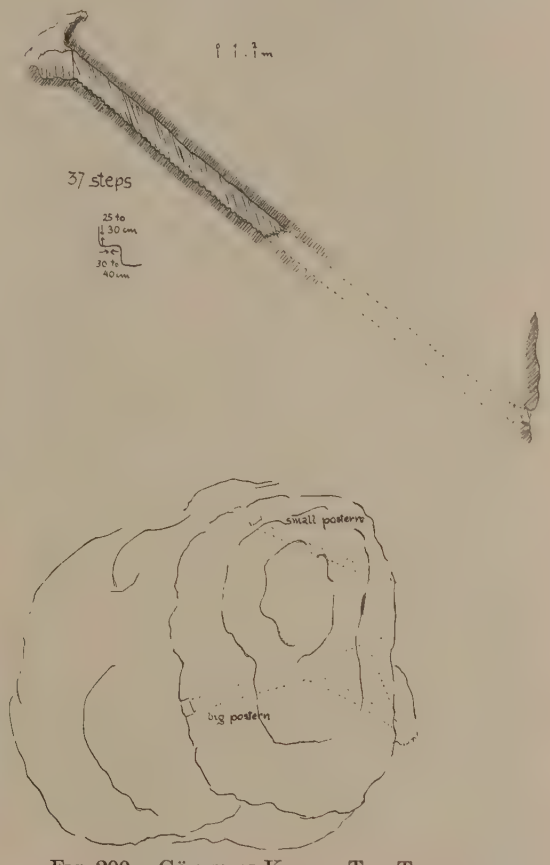



Fig. 200.—Gökchali Kaleh. The Tunnels, with Section of First Tunnel.

[1] *Studia Pontica*, II, 243–47.

after some forty steps it is likewise filled with stones and earth. The two rock-cut tombs are on the east slope of the cliff (cf. Fig. 206, at left). One is quite easily reached by means of a rock-cut passage with steps from a terrace below the summit. It consists of a wide terrace and a very narrow vaulted rectangular room (Figs. 210 and 211). The second tomb is smaller and only to be reached from the base of the cliff by a ladder or by rather dangerous climbing. Its carefully smoothed façade is 5 meters high; its terrace,

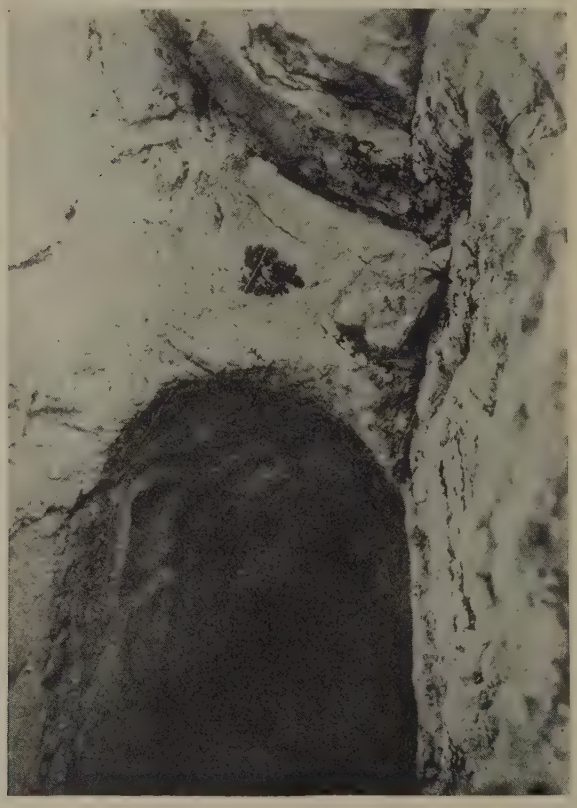


Fig. 201.—Gökchali Kaleh. Entrance to First Tunnel.

Fig. 202.—Gökchali Kaleh. The First Tunnel.

14×2.50 meters. In the middle, four steps lead to the entrance of a rectangular vaulted room 4×4×3 meters (Fig. 212).

Many tunnels such as those just described are known, not only in central Asia Minor, but also in Phrygia and far to the east in Armenia. Nearly always they appear in strategically important places, such, for instance, as the fortresses of Tokat, Turkhal, Niksar, Zileh, and Amasia. Various theories have been offered to explain their use,[1] the most common being that they were a

[1] Cf. Leonhard, *Paphlagonia*, pp. 232–41; *Studia Pontica*, II, 157–59; W. Belck in *Zeitschrift für Ethnologie*, XXXIII (1901), *Verhandlungen*, pp. 471–73.

FIG. 203.—GÖKCHALI KALEH. ENTRANCE TO SECOND TUNNEL

FIG. 204.—GÖKCHALI KALEH. THE SECOND TUNNEL. SECTION AND PLAN

device to supply the castles with water. R. Leonhard suggests a religious significance, stating that, with the exception of a rather late one in Armenia, they have no exit. But at Gökchali Kaleh we found the exits of all three tunnels, and I am sure that by careful search the exits of many other tunnels could be found. Of course it would be a very hard and tiresome task, as the rocks are

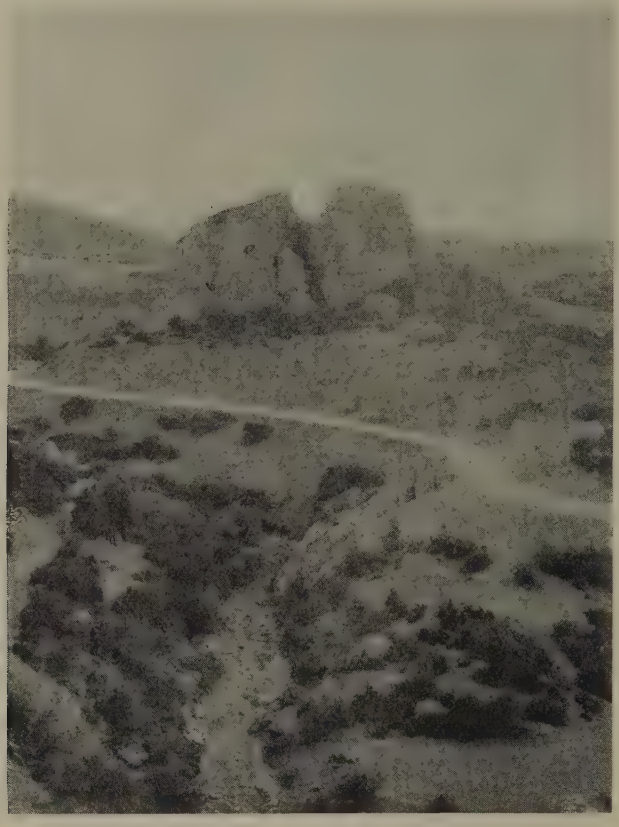


Fig. 205.—Bairam Tepe. The Western Cliff

quickly weathered and earth deposits over plug-blocks may easily conceal the exits.

The tunnels are found in connection with castles which occupy in almost all cases an important strategic site. For religious purposes or to guarantee the water supply, one tunnel would be sufficient; and for supplying water it would not be necessary that the dimensions be so extraordinarily large as, for instance, at Turkhal, the *kaleh* near Chorum, Bairam Tepe, or Gökchali Kaleh. Only one

FIG. 206.—BAIRAM TEPE. THE EASTERN CLIFF

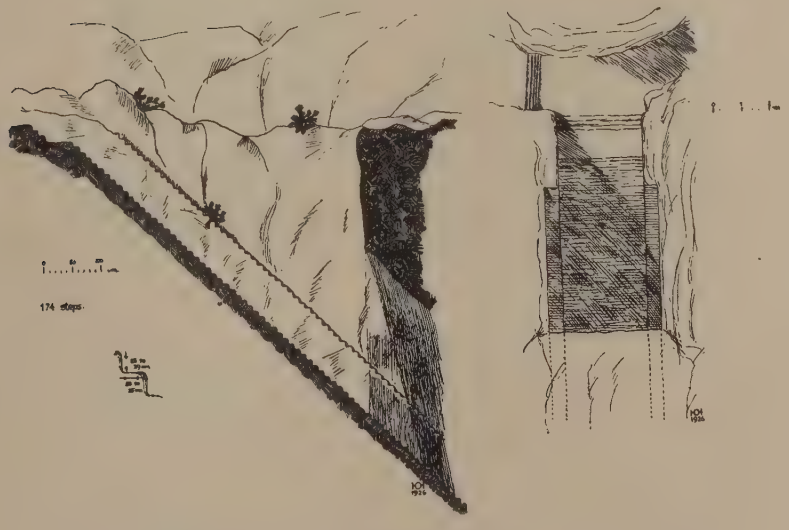



FIG. 207.—BAIRAM TEPE. THE LARGER TUNNEL. SECTION AND PLAN

tunnel, one of those at Amasia, leads to a subterranean water-basin. Again, if these tunnels were for religious purposes only, it seems rather strange that at so many places there are as many as three together, for the tunnels represent hard and expensive work. As for explaining them as wells, I could not find any spring near Gökchali Kaleh, the water supply there having been kept in the two

FIG. 208.—BAIRAM TEPE. BLOCKED ENTRANCE TO SMALLER TUNNEL.

big rock-cut basins on the top. So the only explanation to me is that they were military posterns. The width and height of the tunnels permitted quick moving of part of the castle garrison down to the level of the valleys, unseen by the enemy, who could easily observe any tactical movement that took place on the bare rock. By using these posterns, hostile observation was eliminated. Strabo cites such a type of defense used by the Pontic king Mithradates; and Pompey

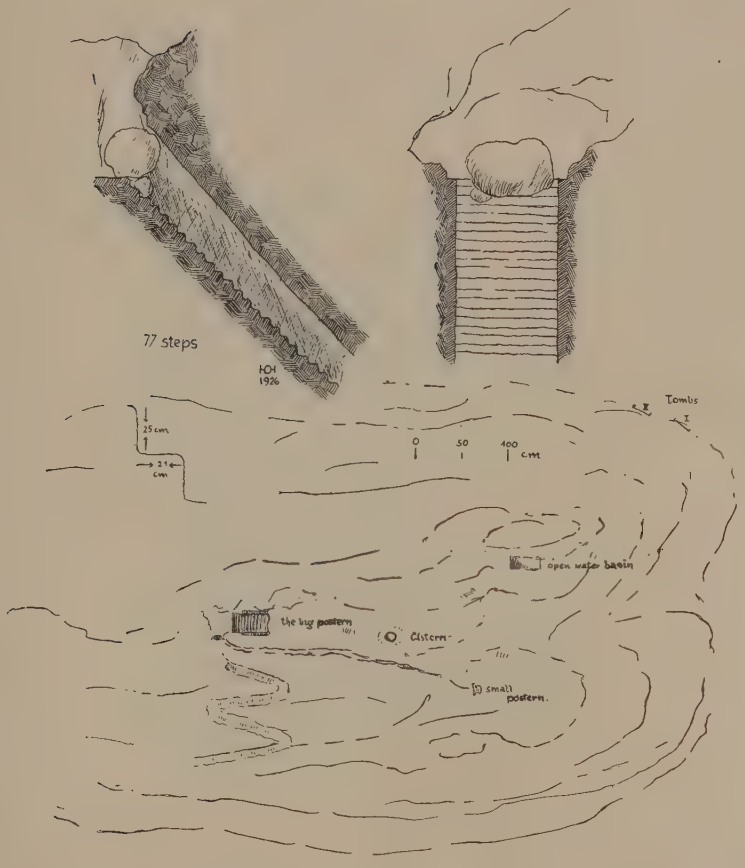



FIG. 209.—BAIRAM TEPE. THE SMALLER TUNNEL. SECTION AND PLAN. BELOW, GENERAL PLAN OF THE SITE.

is said[1] to have filled up these subterranean communications after capturing the fortresses.

A much more difficult and important question is, During what period were the fortifications built? I am inclined to date them very early, perhaps even to the time of the great Hittite Empire, which would not prevent their having been used in later periods also. In the Hittite capital itself, near Boghaz Köi,

Fig. 210.—Bairam Tepe. The Larger Cliff Tomb

we find the frequent use of posterns, though in another form. But the idea is the same—the possibility of attacking the enemy by surprise; and even if the postern exits were known, they were much more easily and effectively barricaded than were real gates in the city walls. To give these tunnels any dating it would be necessary that at least one of these castles be examined very carefully and partially excavated. As to the date of the two rock-carved tombs at Bairam Tepe, the same applies; for the whole absolute chronology of the cliff tombs in Cappadocia and Paphlagonia, with very few exceptions, is vague.

[1] Cf. *Studia Pontica*, II, 158, n. 3.

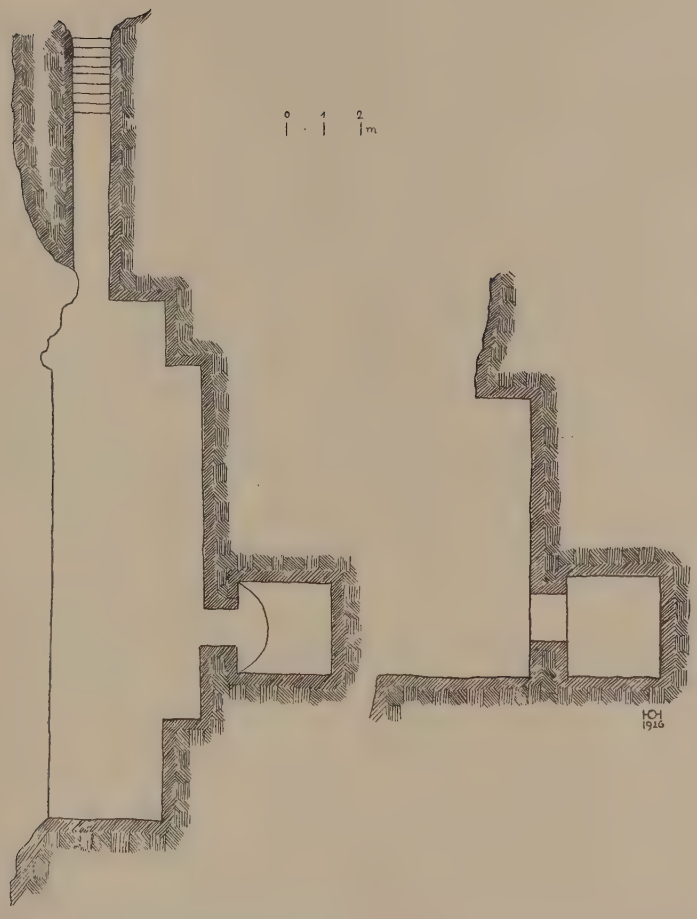



FIG. 211.—BAIRAM TEPE. THE LARGER CLIFF TOMB. PLAN AND SECTION

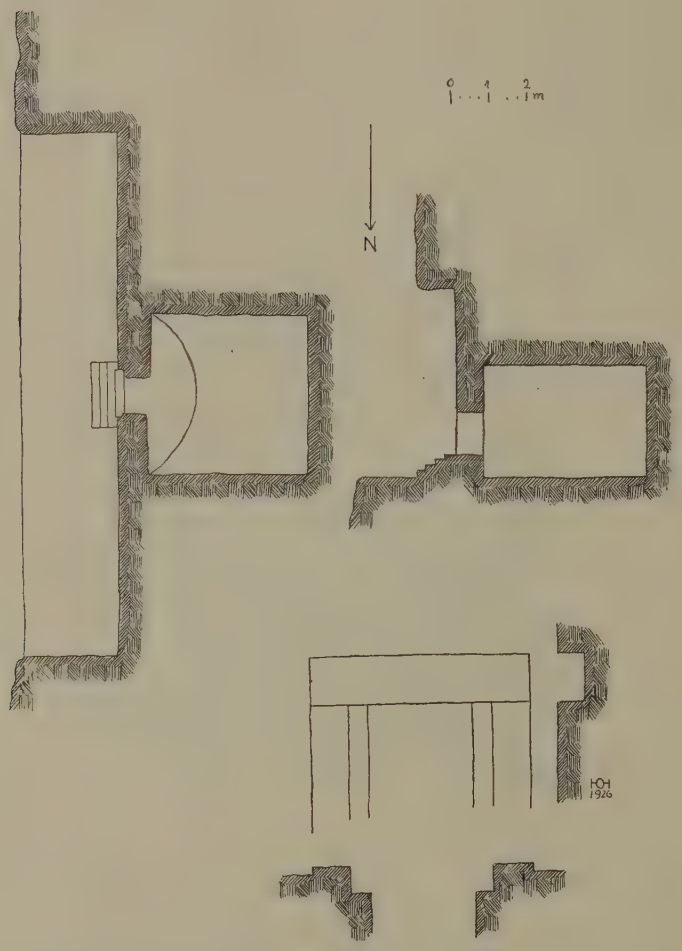



Fig. 212.—Bairam Tepe. The Smaller Cliff Tomb. Plans and Sections.

## THE *HÜYÜKS* SOUTH OF ANGORA AND ON THE ROAD FROM KÖPRÜ KÖI TO KIRSHEHIR

Angora, the capital of the Turkish republic, is situated at the northeastern corner of a plain through which flows, in an east-west direction, the Engürü Özü. Toward the south the plain slopes gently upward, forming an undulating, arid highland bounded on the west by the same stream; for, 30 kilometers west of Angora, after receiving the Ova Chai coming from the northeast, the Engürü Özü changes its east-west direction to a northeast-southwest one. To the east the Inje Su, rising in the south and emptying near Angora into the Engürü Özü, forms the boundary. At its southern end the plateau becomes more broken up into parallel ridges running generally from east to west. The plateau is very dry, and only in the small valleys near springs are a few trees to be seen. The villages are few and rather poor. Especially in the southern part the surface becomes rocky and the summits of the mountains show picturesque rock formations. East of the valley of the Inje Su, toward the Küzül Irmak, is a very irregularly divided mountain land with a few fertile valleys along which lead the main roads toward the east. Along the Tabakshaneh Su, another tributary of the Engürü Özü, a road leads from Angora to Yakhshi Han on the Küzül Irmak. In the same valley now runs also the track of the Angora-Kaisariyeh railroad. Following first the valley of the Inje Su, then turning sharply eastward, another road leads to Köprü Köi. At Köprü Köi the Küzül Irmak, here flowing from south to north, forces its way in a picturesque gorge through this plateau. The southern part of the plateau is formed by the little-known mountain systems of the Kara Sengir Dagh and the Pasha Dagh, which force the Küzül Irmak, coming from the east, to change its direction to the north. The southern slopes of the Pasha Dagh touch the Tuz Chölü ("salt desert"). On its northern slopes are small and relatively fertile valleys. The

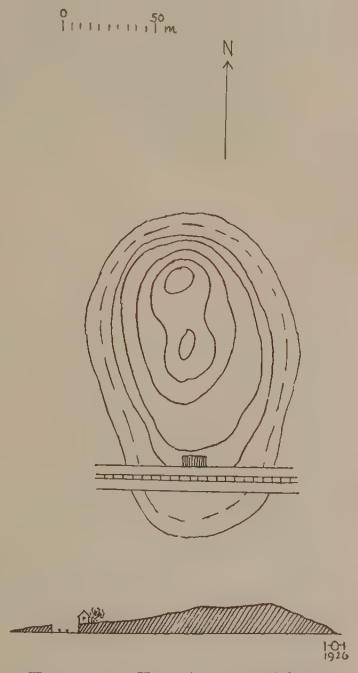



FIG. 213.—THE AMAKZIS HÜYÜK. PLAN AND SECTION.

FIG. 214.—HÜYÜK (NEAR CHAKAL)

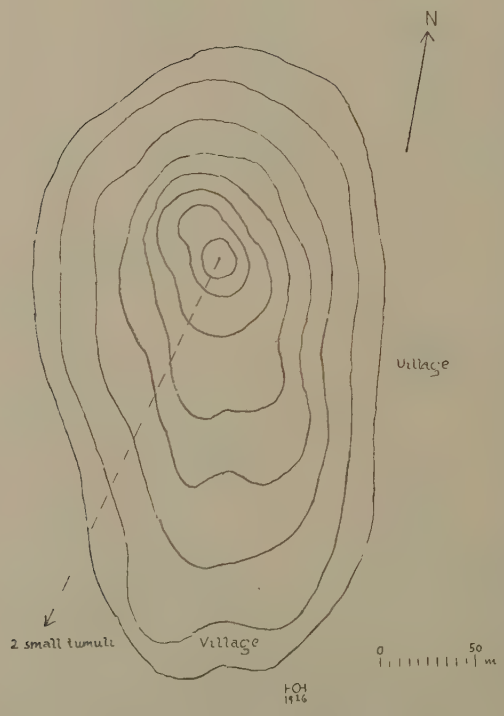



FIG. 215.—HÜYÜK (NEAR CHAKAL). PLAN

east bank of the Küzül Irmak, opposite the Pasha Dagh, is formed by the Karabogha Dagh and its various extensions. The road from Kirshehir to Köprü Köi follows its northeastern slope. Not far east of Köprü Köi is the watershed between the Küzül Irmak and the Delidje Su. The road from Angora divides, after crossing the watershed, into two branches, one following the Aghach Dere northeastward, then entering the Delidje Su valley and continuing through the Sarai Su valley to Yozgad. The other follows the northeastern slope of the Karabogha Dagh and then the valley of the Külijli Su to Kirshehir. In company with Dr. E. Forrer and Professor Weigand we visited this region during the last part of the expedition.

Eighteen kilometers west of Angora, in the valley of the Engürü Özü, di-

rectly at the railroad station of Pasha Chiftlik, is situated a small *hüyük* (Fig. 213). On the Kiepert map this location is indicated as Amakzis. The *hüyük* is about 175 meters long by 100 meters wide, and its highest point is 8–10 meters high. On its surface it shows foundations and fragments of late classical sarcophagi and also a basalt slab bearing a lion in bas-relief (Plate XXIII B). Although similar to "Hittite" representations of this subject, I am inclined to see in it a Phrygian work of art. South of the *hüyük* there seems to have been a large Roman or Byzantine settlement; and the *hüyük*, proved by pottery fragments to have been an ancient "Hittite" settlement, was used during these later periods as a necropolis.

FIG. 216.—LARGE TUMULUS NEAR HÜYÜK

Following the road from Angora to Köprü Köi, after 28 kilometers one reaches Chakal, where the road turns eastward. Nine kilometers west of there,

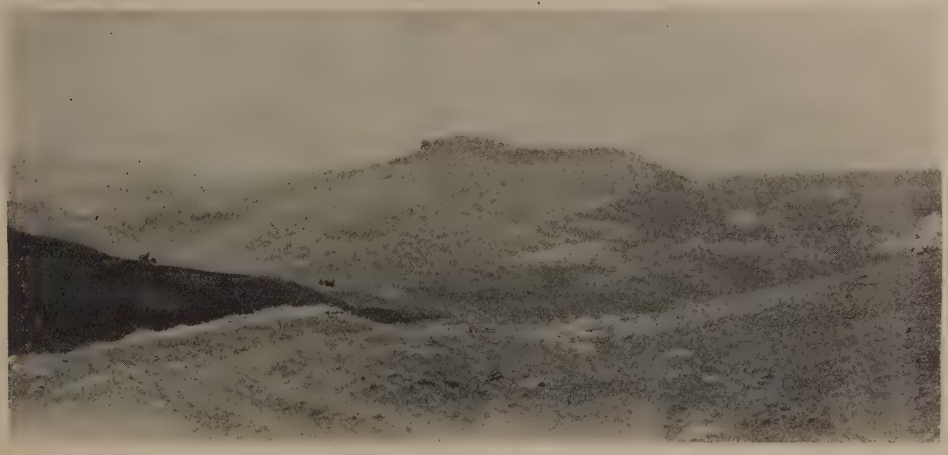


FIG. 217.—GIAUR KALESSI

on the east slope of the valley, the small village of Hüyük is situated around a *hüyük* (Figs. 214 and 215). The *hüyük* is approximately 250 meters in length, 160–180 meters in width, and 12 meters in height. It is covered with pottery fragments of all kinds, but especially red-slipped ware is to be found there. At the crest of the valley slope, where rocks jut out from the banks, there are

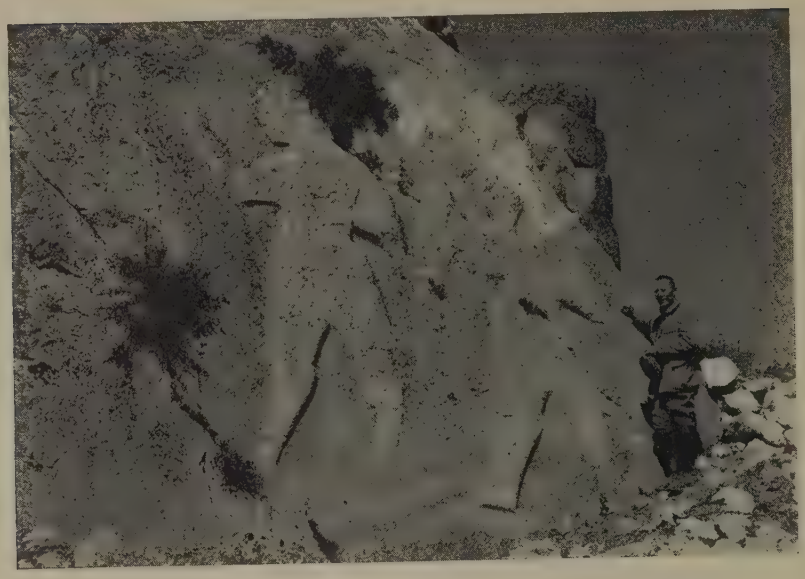


FIG. 218.—GIAUR KALESSI. THE PREVIOUSLY KNOWN RELIEFS

FIG. 219.—GIAUR KALESSI. DETAIL OF WALL

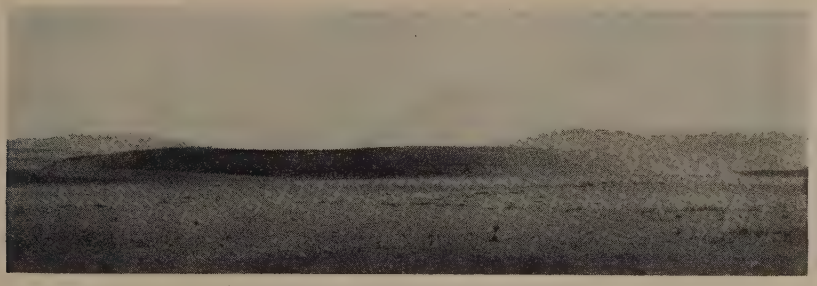


FIG. 220.—THE SUYU GÜZEL HÜYÜK

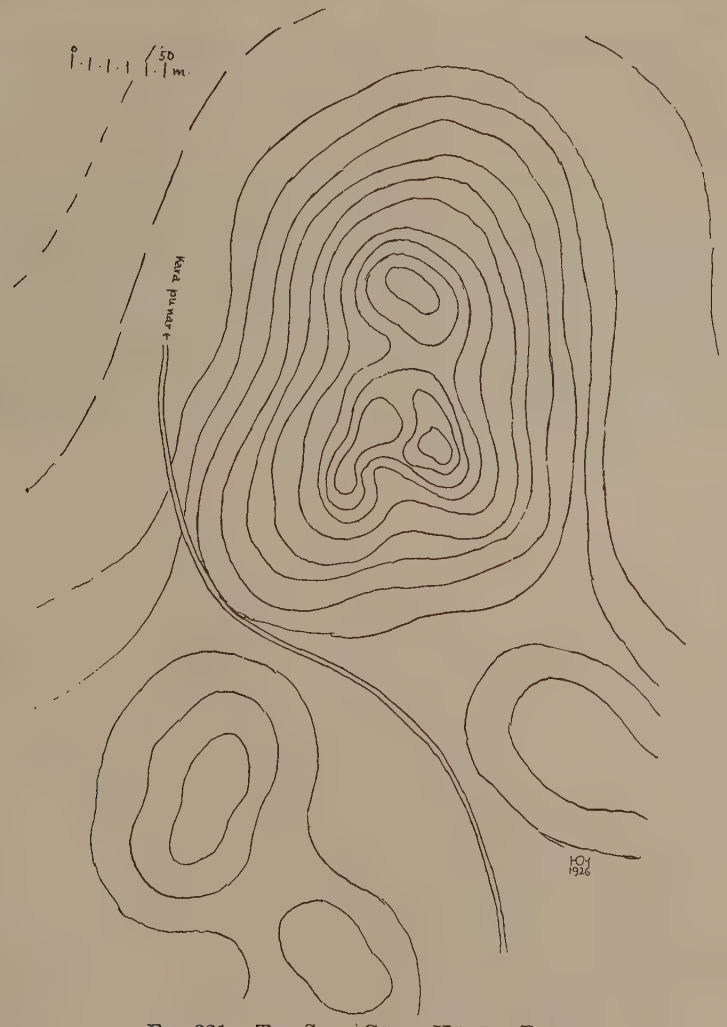



FIG. 221.—THE SUYU GÜZEL HÜYÜK. PLAN

two small *tumuli*. Three and a half kilometers farther to the southeast is a larger one (Fig. 216). Continuing southeast we reached the village of Oyaja, situated in a small circular valley in which rises a rocky hill. There are several Greek inscriptions and architectural fragments of the Roman and Byzantine periods in the town.

Four and a half kilometers farther, 59 kilometers southwest of Angora, we arrived at the famous Giaur Kalessi, discovered by G. Perrot (Fig. 217). The fortress is situated on a truncated hill on the north bank of a deep and narrow valley running in a general east-west direction. Besides the two large rock-carved figures which have long been known (Fig. 218), we found on the same

Fig. 222.—Sofular Hüyük

rock façade a third, a small seated figure with conical headdress toward whom the first two are advancing (Plate XXIV). Investigation proved that Giaur Kalessi itself was only the acropolis of a large town situated on its north and northeast slope. As the rock carvings and the careful and elaborate fortification (Fig. 219) suggest a site of considerable importance, it may possibly be the ancient Kushshar, where the Hittite kings resided before they conquered Hattushash and chose it for their capital. Natives told us that near Dere Köi also, 2 kilometers southeast of Giaur Kalessi, there were rock carvings; but we searched in vain on the many rocks along this mountain range. Turning eastward from this point, we saw between the villages of Karagedik and Mehemedli, about 23 kilometers east of Giaur Kalessi, a medium-sized *hüyük*.

Our last excursion west of the Küzül Irmak was made from Bahla (Kartal) southward. Bahla is a *kaimakamat* situated not far from the Angora–Köprü Köi road. Twenty-five kilometers south of it we found near the village of Suyu

Güzel a remarkable *hüyük* (Figs. 220 and 221). We collected all kinds of very fine pottery fragments. "Hittite" specimens were very frequent. A large part of the surrounding territory, slightly undulating, was also covered with pottery, proving the wide extent of this settlement. The approximate dimensions of the

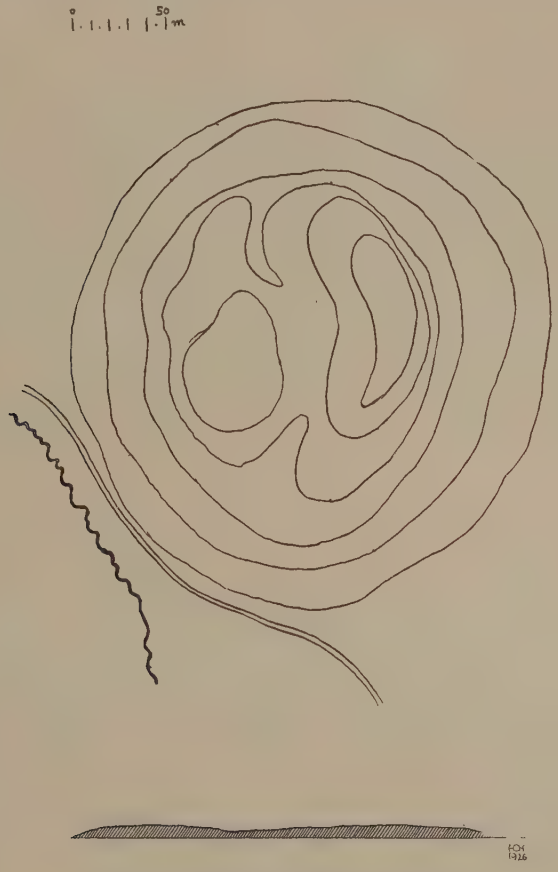


Fig. 223.—Sofular Hüyük. Plan

*hüyük* itself are 320–350 meters in length, 200–250 meters in width, and 12–14 meters in height. About 4 kilometers farther south we found another one, called Sofular Hüyük, about 300–350 meters in length, 250–300 meters in width, and 10–12 meters in height (Figs. 222 and 223). Particularly interesting were specimens of engraved pottery which I collected there. The last *hüyük* which we investigated in this region was the rather small Shedid Hüyük (Fig. 224). Although we collected some "Hittite" pottery fragments there, late classical

and Byzantine types were most prevalent. On the top of the *hüyük* are remains of a Roman wall. In the small cemetery near the village I saw an illegible inscription, probably part of a Roman milestone.

Fig. 224.—Shedid Hüyük

Fig. 225.—Köprü Köi. A Pseudo-Cyclopean Wall

At Köprü Köi (Fig. 225) we crossed the Küzül Irmak. At the west end of the bridge stands the huge figure of a lion, probably a Seljuk monument. Near Köprü Köi itself Dr. E. Forrer investigated an ancient fortress. Continuing

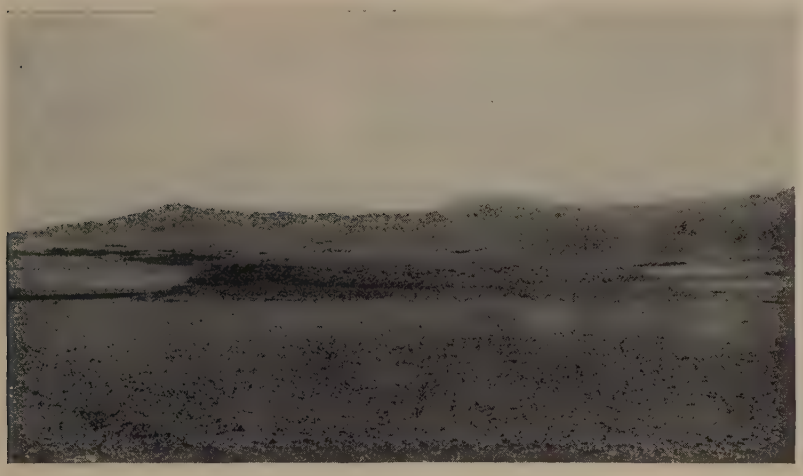


FIG. 226.—THE HÜYÜK NEAR GHAMAN

FIG. 227.—THE CHUGUN HÜYÜK

FIG. 228.—KIRSHEHIR

FIG. 229.—SEVDIGIN HÜYÜK

FIG. 230.—SEVDIGIN HÜYÜK

FIG. 231. THE GÖL HISSAR HÜYÜK

toward Kirshehir, we passed at 3½ kilometers east of Ghaman a large *hüyük* (Fig. 226) and at 2½ kilometers west of Sofular a large and a small one. Near Chugun, where the road turns southward following the Külijli Su to Kirshehir, is a very small *hüyük* (Fig. 227) which might better be called a large *tumulus*. Pottery found there proved "Hittite" occupation.

FIG. 232.—GÖL HISSAR. A TUMULUS

FIG. 233.—KHAS HÜYÜK

The large citadel mound of Kirshehir is simply a very large *hüyük* (Fig. 228). There also we collected "Hittite" pottery fragments. On the mountains around Kirshehir we saw a number of *tumuli* of different sizes. About 10 or 12 kilometers west of it is a medium-sized *hüyük* with three *tumuli* near by (Figs. 229 and 230). It is called by the natives Sevdigin Hüyük. Near Göl Hissar, 6

kilometers east of Kirshehir on the road to Kaisariyeh, is a small *hüyük* which, in contrast to the other ones investigated, has not a relatively smooth surface but shows various slight elevations (Fig. 231) due probably to the remains of sun-dried brick buildings. About 500 meters east of it are two small *tumuli* (Fig. 232). On the road leading from Kirshehir we found, near the village of Khas, a large *hüyük* (Figs. 233 and 234) about 400 meters in length, 300 meters

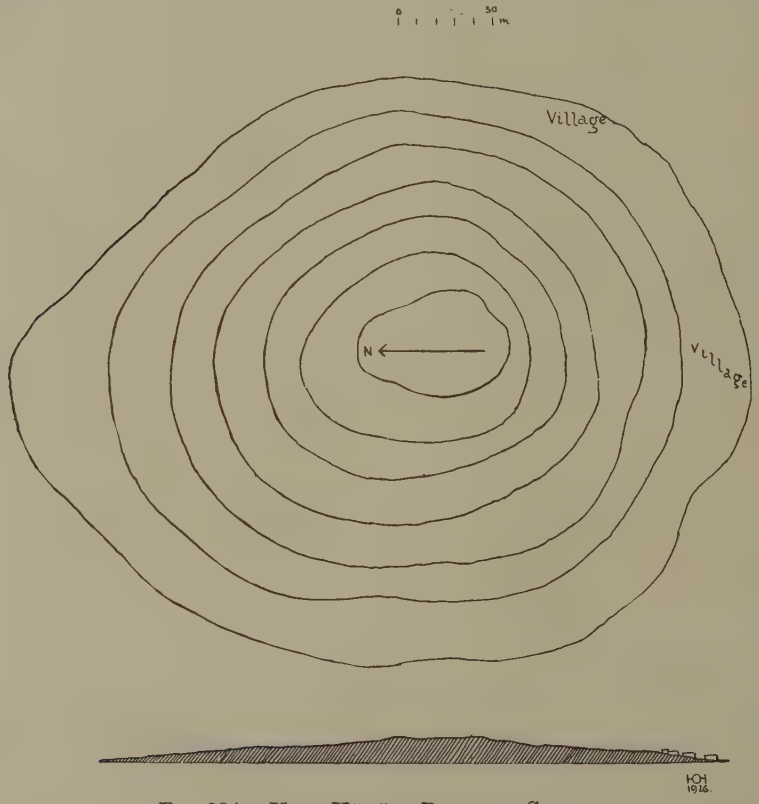



Fig. 234.—Khas Hüyük. Plan and Section

in width, and 8–10 meters in height. Chiefly "Hittite" pottery was collected there. It must have been a very large settlement. Near a small village about 2 kilometers east of it we could see a medium-sized *hüyük*.

As has been said before, it is to be hoped that at least a few of these *hüyüks* may be excavated. Places of such dimensions as the Suyu Güzel and Khas *hüyüks* and Sofular Hüyük, which were probably important settlements during the "Hittite" period, are likely to reward an excavator with a great wealth of archaeological material, if not with works of art and inscriptions.

## THE CAVES AT YARÜM KALEH, KAVASS MAGHARA, AND TASHAN KALEH

Of the three monuments now to be described, two are situated in the territory marked on the Kiepert map as Malya Chölü.[1] The Malya Chölü ("desert") extends in the north to the mountain range south of the Delidje Su, in the south to the Burun Dagh and Küzül Tepe, along the south slope of which runs the Kirshehir-Kaisariyeh road. But at the southeast corner it extends nearly to the north bank of the Küzül Irmak. To the east it is bounded by the Karajerli Su. To the west it slopes gradually up into the great mountain complex of the Chichek Dagh. In its southwestern part is situated the Magli or

FIG. 235.—YARÜM KALEH

Saif Göl. This whole region is as yet very little known. As my purposes were of another nature, I saw only the eastern, northern, and western edges of it, without being able to penetrate farther into this likewise archaeologically interesting territory.

The western edge I saw in coming from Kirshehir along the post road to Yerköi. Since there is now a railroad at Yerköi, the Turks are constructing a new road thither in a nearly straight line northeast from Chugun, a town 9 kilometers north of Kirshehir. At Chugun we left the fertile valley of the Külijli Su and entered the Malya Chölü plateau. It is an imposing view: a very slightly undulating, nearly flat plain extending to the east—dry steppes with a dusty, grayish-yellow coloring. As it slopes gently upward on the west side, which we followed, we had a wide view and could even see the small silvery

[1] R. Kiepert, *Karte von Kleinasien*, Blatt Jozgad.

band of the Magli Göl, a few small villages very far apart, and in the background high and pointed mountains rising abruptly from the plain. One could

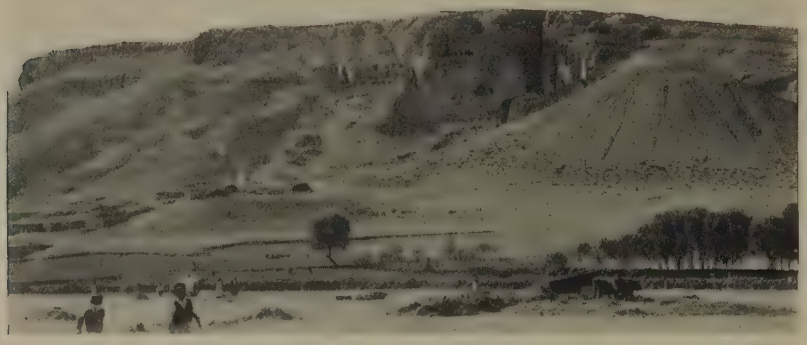


FIG. 236.—YARÜM KALEH

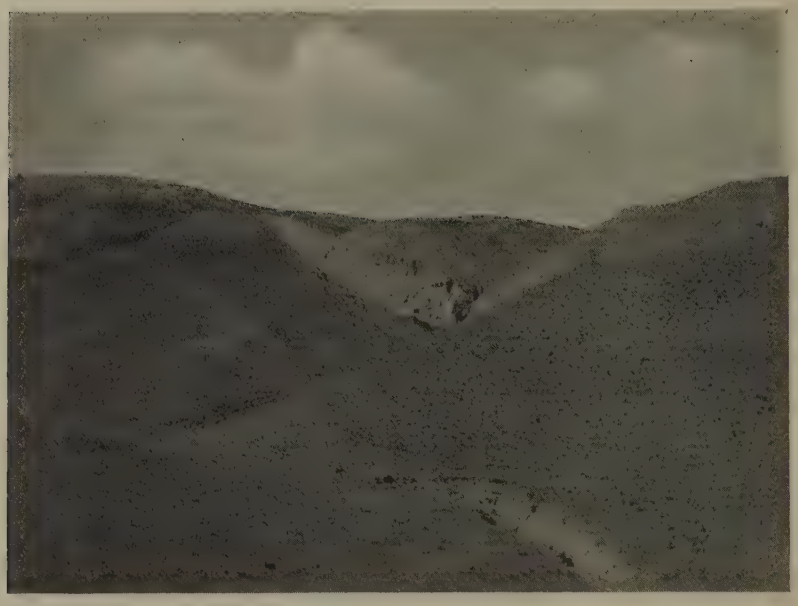


FIG. 237.—KAVASS MAGHARA

not help comparing it with the bottom of an immense dry lake, the mountain peaks representing small islands on its surface. Toward the west, as already

stated, it slopes up toward a mountain complex. No tree or shrub, only the dry steppe grass. It is impossible to understand how the natives in the few little desolate villages can raise wheat on this dry soil.

Yarüm Kaleh (Figs. 235 and 236), where the first of the three caves is situated, lies in this region, about halfway between Kirshehir and Boyalik (Mejidiyeh). It is a small plateau with precipitous sides. On the south, along which a stream runs, is a deep gorge. In this gorge, southeast of the *kaleh*, is hidden the town of Zaramba. At this point is also the actual *kaleh*, a large cave of three levels cut in the nearly vertical slope of the rock. As this *kaleh* was already known, I thought that it had been surveyed and so only took pictures of it. But on my return I was not able to find any record of its ever having been investigated. North of Yarüm Kaleh the slope becomes more and more steep until we reach the various mountain ranges which run nearly parallel northwest to southeast. The panorama to the north becomes a real Alpine prospect. The ranges are partly covered with shrubs and are gashed by deep valleys and gorges with dry river beds. And again the marvelous color scheme, a peculiarity of Anatolia.

The second *kaleh*, Kavass Maghara, lies in the northern part of the Malya Chölü, which here reaches quite to the Delidje Su valley. We entered the plateau south of Yerköi through a valley which leads southward—the same valley in which Bulumashlü is situated. Here we found the same desolate, arid land as on the west, but wild and more irregularly incised by deep, dry river beds. Again single peaks are to be seen, especially the marked rock point of Kechi Kalessi ("goat castle"), but apparently without any trace of human remains. Four kilometers southwest of Bulumashlü we had to leave our car, since deep gorges rendered the whole plateau impassable for it. For three hours we followed one of the gorges in an approximately southwestern direction, until we arrived at its end. An immense rock wall ascends vertically. Cut in it we saw cave openings in three superimposed rows (Fig. 237). At one end a lovely spring flowed directly out of the rock, its water forming a small, clear pool in a natural basin. For perhaps a hundred meters it formed a small running stream, then disappeared in the dry soil. Around it was a small patch of fresh green grass and shrubs, a striking contrast with the yellowish-gray of the landscape, which, with the bright sun upon it, hurt the eyes.

The ground floor of the cave (Figs. 238 and 239) consists of one rectangular room (below at left) 4×2.30 meters, closed by a stone wall, leaving only a small doorway. At one side a narrow entrance leads to a second, smaller room (3×2 meters). Eight meters beyond is the entrance to the great cave. It leads to a long room (about 12 meters). In the rear wall is a niche. The room was

partly divided by a wall, now destroyed, parallel to the façade, forming two rooms at different levels. Besides the entrance, the outer wall is pierced by a small hole and a great window. At one end steps lead upward to the second

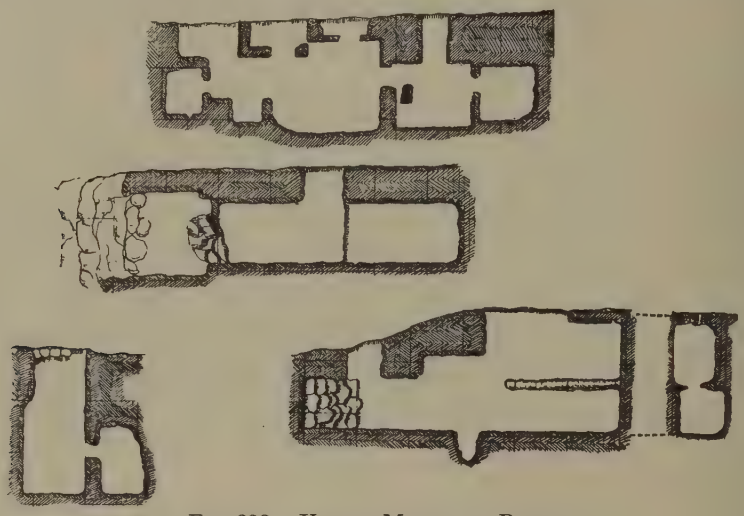


FIG. 238.—KAVASS MAGHARA. PLANS

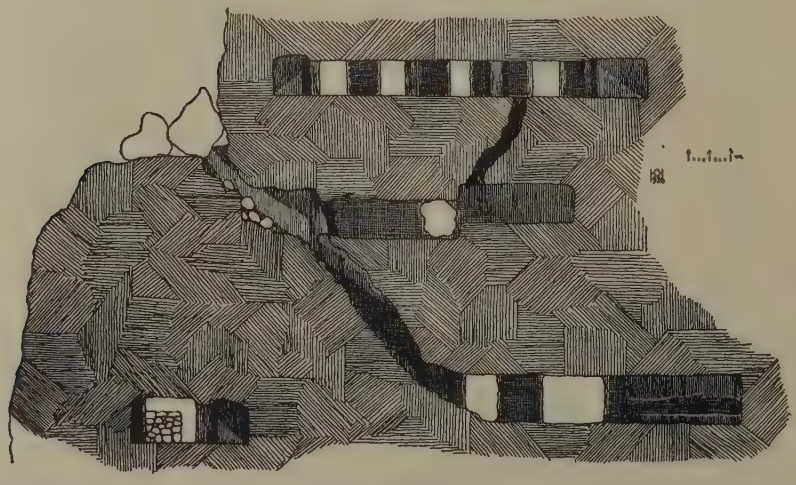


FIG. 239.—KAVASS MAGHARA. SECTION, LOOKING OUTWARD TOWARD FACE OF CLIFF

floor. There is first a hall partly open at the top, as the rock has fallen in. Then comes a second room with an irregular hole in the outer wall, and lastly a third room at a higher level. From there an irregularly cut shaft of about 5.10 meters in length leads to the third floor, the best executed of all. The room into which

the shaft leads has a rather large window and at each side an entrance to another room, that on one side being small, while on the other side there is a series of small rooms or niches around a larger one. This cave system seems to be of the same type as the one at Yarüm Kaleh.

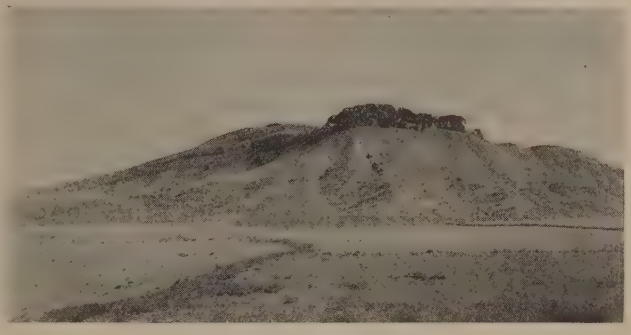


Fig. 240.—Tashan Kaleh

The third *kaleh* is situated near Hadji Shefatli, also south of the Delidje Su, but on the east side of the Karajerli Su. Above its junction with this river the Delidje Su valley broadens again toward the east. Most of the mountain tops framing the valley show fantastic rock formations. They are all of soft limestone. Tashan Kaleh, as this castle is named, can be seen as soon as the

Fig. 241.—Tashan Kaleh. The Caves

gorge of the Delidje Su begins to broaden toward the east, and longer still from the eastern part of the *chöl* plateau (Fig. 240). We were able to proceed with the car to the foot of the mountain slope; then, to reach the top, we had to climb

about three-quarters of an hour on foot. This cave is not so well done as the Kavass Maghara one, but it too is very interesting in its arrangement. It consists of two groups of rooms and three single ones, all on about the same level (Figs. 241 and 242).

The first group (at the right) consists of one big room connected with two smaller ones, itself divided by two deep piers extending inward from its façade. Then follows a single room with a pillar, and then a second, larger one of irregular form. The second group of rooms is far more interesting. From a small platform the entrance leads to a nearly circular vaulted room with two windows.

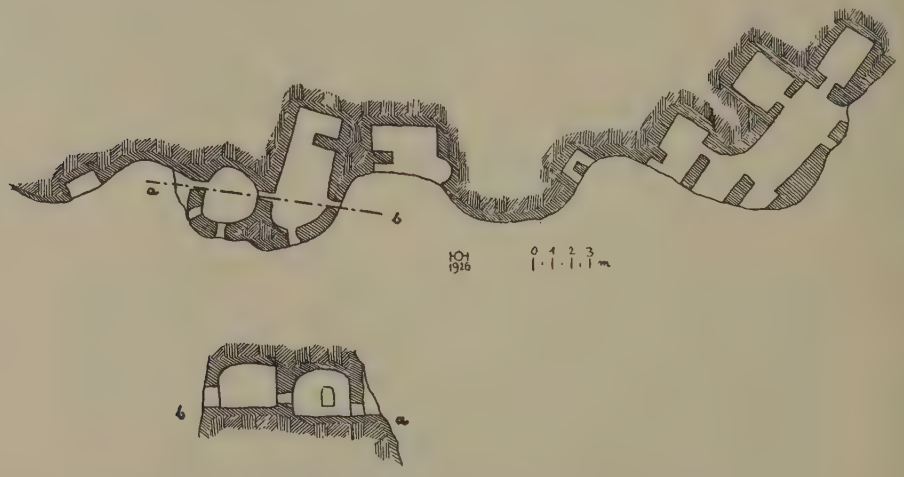



Fig. 242.—Tashan Kaleh. The Caves. Plan and Section

In the same axis with the entrance, a narrow passage leads to a second room, rectangular in shape, but rounded at one end and having a small dividing wall at the other. It stands at a higher level than the first room and, like it, has two windows. A rather small rectangular niche constitutes the last of this series of caves. On the slope leading down from Tashan Kaleh I found a few pottery fragments of uncertain origin, but rather primitive in appearance.

As to the origin and use of these rock *kalehs*, we are still in the dark. Similar caves, long known, at Ürgüb, south of the Küzül Irmak, are Byzantine or at least were used by Byzantine monks as cloisters and churches. But they might all be of an earlier origin, perhaps later on enlarged and altered.

## IV

## THE ROUTE AS REGISTERED IN THE FIELD RECORD

### (July 1 to September 25, 1926)

| | | | Kilometers | |
|---|---|---|---|---|
| July | 1. | Stambul—Mudania—Brussa | 24 | |
| July | 2. | Brussa; excursion to Cherkirge | 18 | |
| July | 3. | Brussa — Inegöl — Gümüsh Dere — Bazarjik — Boz Hüyük | 106 | |
| July | 4. | Boz Hüyük — Chepni — Porya — Chukur Hissar — Eskishehir | 42 | |
| July | 5. | Eskishehir—Hamidiyeh—Kaimaz—Sivri Hissar | 112 | |
| July | 6. | Sivri Hissar; excursion to Kepen | 28 | 14 |
| July | 7. | Sivri Hissar—Mülk—Jamarli—Beli Köprü—Polatli —Mali Köi—Faharet Chesme—Angora | 144 | |
| July | 8. | Angora | | |
| July | 9. | Angora; visit to the Augustus and Roma Temple | | |
| July | 10. | Angora; visit to the citadel | | |
| July | 11. | Angora | | |
| July | 12. | Angora—Arablar—Lala Han—Zela Han—Azi Yozgad—Külüjlar—Yakhshi Han—Kirik Kaleh | 64 | |
| July | 13. | Kirik Kaleh; excursion to Keskin Sivrissi | 38 | 16 |
| July | 14. | Kirik Kaleh; excursion to Ahali; leaving for Keskin via Hassan Dede | 44 | |
| July | 15. | Keskin — Aivalü — Sekili Köprü — Yerköi Station —Asha Elma Hajilar—Yozgad | 138 | |
| July | 16. | Yozgad | | |
| July | 17. | Yozgad; excursion to Bulumashlü via Sarai—Yerköi. | 84 | |
| July | 18. | Yozgad—Chalatli—Kara Kaya—Köhne—Churuk Köi — Imrahor — Bahatlin — Pörenk — Karaveli —Terzili—Karayap—Terzili Hammam | 96 | |
| July | 19. | Terzili Hammam—Karayap—Alishar *hüyük*—Chaush Köi—Yazili Tash—Shakh Muratli—Kerkenes Dagh—Giaur Ören—Balali—Chalatli—Yozgad | 98 | |
| July | 20. | Yozgad—Aladja—Hüyük—Boghaz Köi | 101 | |
| July | 21. | Boghaz Köi; visit to the ancient city | | |

| | | Kilometers | |
|---|---|---|---|
| July 22. | Boghaz Köi; Yazili Kaya | 10 | |
| July 23. | Boghaz Köi; on horseback to Büyük Nefez Köi via Tambassan—Bajili—and return | | 46 |
| July 24. | Boghaz Köi—Sungurlu—Boz Tepe—Kaleh Boinu | 84 | |
| July 25. | Kaleh Boinu—Kuntshaltak—Chorum | 82 | |
| July 26. | Chorum; excursion to Sarai and *kaleh* | 52 | |
| July 27. | Chorum—Osmanjik—Hadji Köi | 110 | |
| July 28. | Hadji Köi—Merzivan—Khawsa—Kavak—Samsun | 114 | |
| July 29. | Samsun | | |
| July 30. | Samsun; employment of a new dragoman | | |
| July 31. | Samsun; excursion to Kara Samsun | 10 | |
| Aug. 1. | Samsun | | |
| Aug. 2. | Samsun; excursion to Akalan | 32 | |
| Aug. 3. | Samsun; excursion to a necropolis | 24 | |
| Aug. 4. | Samsun; excursion to the Hodja Dagh | 36 | |
| Aug. 5. | Samsun; excursion to the *tumuli* | 16 | |
| Aug. 6. | Samsun; excursion to the *tumuli* | 28 | |
| Aug. 7. | Samsun — Chakalli — Kavak — Utahkanlar — Darukk Han—Khawsa | 64 | |
| Aug. 8. | Khawsa — Hammam Chak — Hillas — Kurun Köi—Ladik—Amasia—Inepasan—Turkhal—Tokat | 196 | |
| Aug. 9. | Tokat; excursion to Comana Pontica | 24 | |
| Aug. 10. | Tokat; excursion to Bairam Tepe | 31 | |
| Aug. 11. | Tokat; excursion to Niksar | 96 | |
| Aug. 12. | Tokat—Cherchi—Sonyud—Pazard Köi—Turkhal | 52 | |
| Aug. 13. | Turkhal—Han Öni—Turkhal—Zileh—Amasia | 79 | |
| Aug. 14. | Amasia—Aleman Chiftlik—Gönnenjik | 42 | |
| Aug. 15. | Gönnenjik — Gökchali — Aleman Chiftlik — Olas — Zara—Amasia | 48 | 10 |
| Aug. 16. | Amasia | | |
| Aug. 17. | Amasia—Merzivan—Chorum | 106 | |
| Aug. 18. | Chorum | | |
| Aug. 19. | Chorum—Aladja—Hüyük | 68 | |
| Aug. 20. | Hüyük; excursion to Kara Hissar | | 21 |
| Aug. 21. | Hüyük; excursion to the *tumuli* | | 17 |
| | Hüyük—Gafuslar—Kiran Küshlar—Sungurlu—Iniji—Kara Chai—Büyük Küzül—Kaushut—Chadirjük—Korchullu—Hüsseinli—Imatli | 76 | |

| | | Kilometers | |
|---|---|---|---|
| Aug. 22. | Imatli—Hajilar—Bostanlü—Küi Helleji—Kavurüalli—Yeshillü—Hamzali—Sarim Bey—Shekh Shamil—Hisir Shekh—Bali Shekh—Kirik Kaleh | 124 | |
| Aug. 23.<br>Aug. 24. | Kirik Kaleh—Keskin—Köprü Köi—Angora | 196 | |
| Aug. 25. | Angora | | |
| Aug. 26. | Angora | | |
| Aug. 27. | Angora; excursion to the *tumuli* near the city | 18 | |
| Aug. 28. | Angora; inspection of the excavations at the Augustus and Roma Temple; excursion to the so-called "Phrygian necropolis" | 9 | |
| Aug. 29. | Angora; excursion to Pasha Chiftlik (Kilometer 18 on the Angora–Haidar Pasha railroad) | 42 | |
| Aug. 30. | Angora; the Turkish national holiday | | |
| Aug. 31. | Angora; excursion to Ak Hüyük | 41 | |
| Sept. 1. | Angora; excursion to Takhta Kaleh and Boz Hüyük via Faharet Chesme | 109 | |
| Sept. 2. | Angora—Gölbashi—Chakal | 32 | |
| Sept. 3. | Chakal — Hüyük — Oyaja — Giaur Kalessi — Dere Köi — Oyaja — Urumgush — Karagedik — Germik—Mehemedli—Bahla (Kartal) | 106 | |
| Sept. 4. | Bahla | | |
| Sept. 5. | Bahla — Chikdemlü — Karaburun — Suyu Güzel — Sofular Hüyük—Shedid Hüyük—Kesik Köprü—Köprü Köi | 102 | |
| Sept. 6. | Köprü Köi—Kara Kaya—Ghaman—Sofular—Chugun—Kirshehir | 96 | |
| Sept. 7. | Kirshehir; excursion to the Sevdigin Hüyük | 32 | |
| Sept. 8. | Kirshehir—Göl Hissar—Chugun—Tosun Burun—Üchayak—Üchleri—Khas Hüyük—Yarüm Kaleh—Mejidiyeh—Yerköi Station—Yerköi | 96 | |
| Sept. 9. | Yerköi; excursion to the mountains north of Yerköi. | | 14 |
| Sept. 10. | Yerköi; excursion to Kavass Maghara via Bulumashlü—Kechi Kalessi—Hajoll | 44 | 16 |
| Sept. 11. | Yerköi; excursion to Büyük Nefez Köi via Uyuz Hammam—Kara Shehir—Yamuklar—Hojan—Mengen | | |

| | | Kilometers |
|---|---|---|
| | —Altükara—Büyük Nefez Köi—Bakshejik—Küchük Nefez Köi (Nefessi)—Hattibin Köi—Gümüsh Ören | 84 |
| Sept. 12. | Yerköi; excursion to Karagedik via Hüyük Köi—Stambulolu | 48 |
| Sept. 13. | On horseback to Asha Elma Hajilar via Uyuz Hammam and back to Yerköi via the Sarai Su valley.. | 25 |
| Sept. 14. | Yerköi—Hüyük Köi—Stambulolu—Akche Koyun—Jafarli—Hadji Shefatli—Hamzali—Temlik—Jiblakh—Bash Köi—Karasenir and back to Stambulolu via Kazushak—Akche Koyun | 68 |
| Sept. 15. | Stambulolu—Akche Koyun—Hadji Shefatli—Tashan Kaleh—valley of the Konak Su—Pasha Köi—Sari Ören—Dedik—Jamarli—6 kilometers east of Dedik in the Konak Su valley—Sari Ören—Battal—Ibrahim Hodjali—Güzeli Chiftlik—5 kilometers east of Kuzaji | 96 |
| Sept. 16. | Five kilometers east of Kuzaji—Kuzaji—Jiblakh—Kabani—Bash Köi—Karasenir—Kandlija and back to Jiblakh | 51 |
| Sept. 17. | Jiblakh—Kabani—Bash Köi—Karasenir—Kandlija—5 kilometers southeast of Kandlija and back to Kandlija by the same road | 48 |
| Sept. 18. | Jiblakh—Kabani—Bash Köi—Karasenir—Kandlija—Karafakeli—Eski Ören—Almalü—Düvel Köi—Himmet Dede—Malkanjik—Demtrji Kaya—Boghaz Köprüsü—Ambar—Kaisariyeh | 123 |
| Sept. 19. | Kaisariyeh | |
| Sept. 20. | Kaisariyeh—Kül Tepe and back to Kaisariyeh | 36 |
| Sept. 21. | Kaisariyeh—Arja Kaya—Talas—Zinjidereh and back to Kaisariyeh | 28 |
| Sept. 22. | Kaisariyeh—Boghaz Köprüsü—Injesu—Devili Karahissar—Arabli—Eski Andaval—Nigdeh | 128 |
| Sept. 23. | Nigdeh—Öküzli Hissar—Uluküshlar | 54 |
| Sept. 24.<br>Sept. 25. | By railroad from Uluküshlar via Eregli—Konia—Afiun Karahissar—Eskishehir—Ismid—Haidar Pasha to Stambul | 978 |

SUMMARY

| | | Kilometers | |
|---|---|---|---|
| July 1–28. | Mudania—Samsun.. | 1,589 | 76 |
| July 29–Aug. 24. | Samsun—Angora... | 1,348 | 48 |
| Aug. 25–Sept. 12. | Angora—Yerköi.... | 859 | 30 |
| Sept. 13–23. | Yerköi—Ulukūshlar. | 632 | 25 |
| | | 4,428 | 179[1] |

[1] The first of these two columns shows kilometers covered by automobile; the second, kilometers covered on foot or horseback.

# INDEX AND GLOSSARY

**Bold-face** references are page numbers of illustrations only


Abydos, Egypt, 66
Adana, 67
Aegean culture, 32
Afiun Karahissar, 7, 158 (Sept. 25)
Aga Dede, **78,** 79
*aghach*, tree
Aghach Dere, 79, 138
Ahali, 15, **74,** 75–76, 155 (July 14)
"Aḫḫijava," 1
Aivalü, 17, 79, **81,** 155 (July 15)
Akalan, 31–32, **35–36,** 156 (Aug. 2)
Akche Koyun, 86, 158 (Sept. 14–15)
Ak Dagh (in *vilayet* of Yozgad), 77
Ak Dagh Maden (Maden), 77
Ak Hüyük, 157 (Aug. 31)
Aladja, 1, 4, 20, 23, 41, **47,** 98, 100, 155 (July 20), 156 (Aug. 19)
Aleman Chiftlik, 156 (Aug. 14–15)
Alishar, 18, 20, 53, 79, 89, **92–93,** 155 (July 19)
Alizi, *see* Shakh Muratli
Allen, T. G., 64, 66
Almalü, 96, 158 (Sept. 18)
Altükara, 108, **117,** 158 (Sept. 11)
Altü Yapan, **20–21,** 23
Amakzis (Pasha Chiftlik), 49, **137,** 139, 157 (Aug. 29), Pl. XXIII B
Amasia, 5, 28–29, 33–35, 39–41, 124, 128, 132, 156 (Aug. 8 and 13–17), Pls. II–III
Ambar, 158 (Sept. 18)
Ambarjik, 26
Amisus, *see* Kara Samsun
Anatolia (Asia Minor), 1–5, 61–62, 66–67, 74, 98, 128, 151
Anatolian: railroad, 9; Vichy, 28; village, **13**
Ancyra, *see* Angora
Anderson, J. G. C., 1, 61–62, 98
Angora (Ankuvash, Ancyra, Engürü, Ankara), 5, 7, 9, **11,** 12, **13,** 17, 43, 46, **48,** 49–50, 59–60, 64–65, 68, 79, 97, 100, 102, 120, 137–39, 142, 155 (July 7–12), 157 (Aug. 24–Sept. 2), 159
Ankara, *see* Angora
Ankuvash, *see* Angora
Arabic inscription, 120
Arablar, 155 (July 12)
Arabli, 158 (Sept. 22)
Arabsefer Su, 20–21
Arja Kaya ,158 (Sept. 21)
Armenia, 128, 130
Armenian: mountains, 77; village, 80
Asha Elma Hajilar, 51, 82, 84, 155 (July 15), 158 (Sept. 13)
Asia Minor, *see* Anatolia
Assyrians, 2
Attys, 59
Austrian engineers, 68, 93
*ayak*, leg
*azi*, revolting, rebellious
Azi Yozgad, 12, **13–14,** 155 (July 12)

*baba*, father
Baghdad, 5
Bahadin, *see* Bahatlin
Bahatlin (Bahadin), 18, 155 (July 18)
Bahla (Kartal), 50, 142, 157 (Sept. 3–5)
Bairam Tepe (Horosh Tepessi), 35, 127, 130, **131–33,** 134, **135–36,** 156 (Aug. 10)
Bajili, 107, 156 (July 23)
Bakshejik, 158 (Sept. 11)
Balali, 20, 155 (July 19)
Bali Shekh, 157 (Aug. 22)
*bash*, head
Bash Köi, 93, 158 (Sept. 14 and 16–18)
Battal, 158 (Sept. 15)
Bayerische Akademie der Wissenschaften, 59, 99
Bazarjik, 7, 155 (July 3)
Belck, W., 98, 128
Beli Köprü, 9, 49, 59, 155 (July 7)
Berlin: Museum, 66–67, 102; University, 2, 79
Black Sea (Kara Deniz), 29, **32,** 77
*boghaz*, throat; gorge
Boghaz Köi (Hattushash), 1–2, 4, 9, 20, **21,** 25, 55, 60, 65, 80, 97–98, 101–3, 109, **113–14,** 134, 142, 155–56 (July 20–24)
Boghaz Köprüsü, 158 (Sept. 18 and 22)
*boinu*, horn
Bostanlü, 157 (Aug. 22)
Boyalik, *see* Mejidiyeh
*boz*, gray
Boz Hüyük (Lamunia), 2, 7–8, 155 (July 3–4), 157 (Sept. 1)

Boz Tepe, 50, 156 (July 24)
*bozuk*, arrow
Bozuk, *see* Yozgad
Bozuk Chai, *see* Sarai Su
Brandenburg, E., 59, 99
British: maps, 2; School at Athens, 61
Brussa, 7, 155 (July 1–3)
*budak*, branch
Budak Özü Chai, 25, 41, 101, 109
*büyük*, large
Büyük Kaleh, 102
Büyük Küzül, 156 (Aug. 21)
Büyük Nefez Köi (Tavium, Nefez Köi), 25, 51, 82, 103, 107–9, **117,** 156 (July 23), 157–58 (Sept. 11), Pl. IX
Bulumashlü, 53, 69, 85, **87–89,** 151, 155 (July 17), 157 (Sept. 10)
*burun* (Old Turkish), nose
Burun Dagh, 149
Byzantine: architectural fragments, 8, 56, **58,** 59, 82, 142; castle, 120; caves, 154; churches, 50, 55; glazes, 43; hermit, 76; inscription, 9; monks, 154; pottery, 3, 8, 26, 60, 64, 82, 85, 144; remains, 9, 27, 33, 39; settlement, 139; tiles, 64; tombstones, 64

Caesarea, *see* Kaisariyeh
Cairo Museum, 66–67
Cappadocia, 91, 100, 134
*chadir*, tent
Chadirjük, 156 (Aug. 21)
*chai*, creek
Chakal, 50, 139, 157 (Sept. 2–3)
Chakalli, 156 (Aug. 7)
Chakmak Hüyük, 87
Chalatli, 18, 20, 155 (July 18–19)
Changri, 41
Chantre, E., 1, 4, 17–18, 79, 88, 97–98
Charles, Benson B., 102
*chaush*, sergeant
Chaush Köi, 155 (July 19)
Chekerek Irmak, 124
Chepni, 155 (July 4)
Cherchi, 156 (Aug. 12)
Cherkess (Circassians), 26
Cherkess Köi, **25**
Cherkirge, 155 (July 2)
*chesme*, spring (of water)
Chicago: Art Institute of, 66; University of, 1
*chichek*, flower
Chichek Dagh, 51, 149
*chiftlik*, farm
Chikdemlü, 157 (Sept. 5)
Chipiez, Ch., 8, 98
*chöl*, desert
Chomak Dagh, **15,** 18
Chorum, 26–28, 35, 41, 98, 100, 122–23, **124,** 126, 130, 156 (July 25–27, Aug. 17–19)
Chorum Chai, 27, 123–24
Christian: chapel, 39; tombstones, 64, **65**
Chugun, 50, **145,** 147, 149, 157 (Sept. 6 and 8)
Chukur Hissar, 9, 155 (July 4)
Chukurjuk Su, 14
Churuk Köi, 18, 155 (July 18)
Cimmerians, 2
Circassians, *see* Cherkess
Comana Pontica, 35, **41–43,** 156 (Aug. 9), Pl. IV
Constantinople, *see* Stambul
Crowfoot, J. W., 61
Cumont, E., 1
Cumont, F., 1, 37, 127

*dagh*, mountain range
Darukk Han, 156 (Aug. 7)
Davies, N. de G., 66
*dede*, holy place
Dedik, 88, **90, 92,** 97, 158 (Sept. 15)
*delidje*, diminutive of *deli*, crazy
Delidje-Konak Su (Delidje Su and Konak Su as one stream), 4, 17–18, 25, 41, 51, 77–82, **83,** 85–89, 100, 109, 138, 149, 151, 153, 158 (Sept. 15)
Delidje Su, *see* Delidje-Konak Su
Demtryi Kaya, 158 (Sept. 18)
Denek Maden, *see* Keskin
*deniz*, sea
*dere*, valley
Dere Köi, 142, 157 (Sept. 3)
Dervent, 29, **31–33**
Deutsche Orient-Gesellschaft, 1, 102
Deutsches Archäologisches Institut, 8
Devili Karahissar, 158 (Sept. 22)
Djemil Bey, 5
Dodd, Isabel F., 86
Dromedar, 29, **34**
Düvel Köi, 96, 158 (Sept. 18)

Eccobriga, *see* Kirik Kaleh
*egri*, crooked
Egri Özü, 18, 20
Egypt, 67
Egyptian: names, 67; pharaohs, 1; statuettes, 7, 17, 64–67; writing, 67
Engürü (Old Turkish), *see* Angora
Engürü Özü, 12, 137–38
Eregli (Heraclea), 158 (Sept. 24)

*eski*, old
Eski Andaval, 158 (Sept. 22)
Eski Ören, 96, 158 (Sept. 18)
Eskishehir, 8–9, 55, 155 (July 4–5), 158 (Sept. 25)

Faharet Chesme, 9, **11,** 59, 155 (July 7), 157 (Sept. 1), Pl. V B
Fakeli, *see* Karafakeli
Forrer, E., 1–2, 5, 46, 51, 79, 109, 138, 144

Gafuslar, 156 (Aug. 21)
Gardiner, A. H., 66
Garstang, J., 23, 98, 111
German maps, 2
Germik, 157 (Sept. 3)
Germili Su (Kelkid Irmak), 37
Ghaman, **145,** 147, 157 (Sept. 6)
*giaur*, infidel (non-Moslem), Christian
Giaur Kalessi (Kushshar?), 50, **139–40,** 142, 157 (Sept. 3), Pl. XXIV
Giaur Ören (Göz Baba [village]), 155 (July 19)
Gökchali, 156 (Aug. 15)
Gökchali Kaleh, 124, **127–29,** 130, 132
*göl*, lake
Gölbashi, 157 (Sept. 2)
Göl Hissar, **146,** 147, 157 (Sept. 8)
Gönnenjik, 40–41, 124, 156 (Aug. 14–15)
Götze, Albrecht, 1
*göz*, eye
Göz Baba (village), *see* Giaur Ören
Gordium, 9, 100
Graeco-Roman remains, 67
Greek inscriptions, 40, 142
Greenwich, England, 77
*gümüsh*, silver
Gümüsh Dere, 155 (July 3)
Gümüsh Ören, 158 (Sept. 11)
*güzel*, beautiful
Güzeli Chiftlik, 158 (Sept. 15)
Guillaume, co-author with Perrot, 1, 98, 111

*hadji*, one who has made the pilgrimage to Mecca
Hadji Köi, 122, 156 (July 27–28)
Hadji Shefatli (Shefatli), 77, 79, 86–87, **90,** 153, 158 (Sept. 14–15)
Haidar Pasha, 157 (Aug. 29), 158 (Sept. 25)
Hajilar, 157 (Aug. 22)
Hajoll, 157 (Sept. 10)
Halil Bey, 5
Halys River, *see* Küzül Irmak
Hamidiyeh, 9, **10,** 155 (July 5)
*hammam*, (hot) bath
Hammam Chak, 156 (Aug. 8)
Hamzali, 157 (Aug. 22), 158 (Sept. 14)
*han*, inn
Han Öni, 39, **46,** 156 (Aug. 13)
Hassan Dede, 155 (July 14)
Hattibin Köi, 109, 158 (Sept. 11)
Hattushash, *see* Boghaz Köi
Hepzefi, 67
Heraclea, *see* Eregli
Hillas, 156 (Aug. 8)
Himmet Dede, 158 (Sept. 18)
Hirschbold, Mr., 5
Hisir Shekh, 157 (Aug. 22)
*hissar*, castle
Hittite: capital, 134; Empire, 1–2, 32, 65, 77, 80, 101–2, 134; kings, 142; power, 1; question, 1
"Hittite": archaeology, 119; bas-reliefs, **17,** 20, 23, 139; city states, 1; culture, 97; pottery, 3–4, 88, 143, 147–48; road, 109; sculptures, 23, 69; settlements, 3, 81, 87, 139, 148; sites, 1, 3, 61, 98; strata, 3, 67; terra cottas, 1
Hittites, 2, 4
*hodja*, priest
Hodja Dagh, 32, **37,** 156 (Aug. 4)
Hojan, 157 (Sept. 11)
*horosh*, rooster
Horosh Tepessi, *see* Bairam Tepe
Hrozný, F., 97
Hüssein, chauffeur, 5, 53
Hüsseinli, 156 (Aug. 21)
*hüyük*, mound
Hüyük (near Aladja), 1–2, 4, **13,** 23–25, 41, 98–102, **103–5, 112,** 155 (July 20), 156 (Aug. 19–21), Pl. VII
Hüyük (near Chakal), 2, **138,** 139, 157 (Sept. 3)
Hüyük Köi, 86, **89,** 158 (Sept. 12 and 14)
Humann, K., 8, 98, 111
Huntington, E., 1, 98

Ibrahim Hodjali, 158 (Sept. 15)
Iconium, *see* Konia
*imam*, leader, priest
Imatli, 41, **47,** 156 (Aug. 21), 157 (Aug. 22)
Imrahor, 18, 155 (July 18)
Inegöl, 155 (July 3)
Inepasan, 156 (Aug. 8)
Iniji, 156 (Aug. 21)
Inje Su (river), 137
Injesu (village), 158 (Sept. 22)
Ionic capitals and columns, 64
*irmak*, river

Iskelib, 26
Ismid, 158 (Sept. 25)
Istanbul, *see* Stambul

Jafarli, 158 (Sept. 14)
Jamarli, 88, **91,** 155 (July 7), 158 (Sept. 15)
*jiblakh*, naked
Jiblakh (Jilbakh), 53, 158 (Sept. 14 and 16–18)
Jilbakh, *see* Jiblakh
Justinianopolis, *see* Sivri Hissar

Kabani, 158 (Sept. 16–18)
*kaimakamat*, county; county seat
Kaimaz, 155 (July 5)
Kaisariyeh (Caesarea), 4–5, 12, 43, 53, 60, 87, 97, 137, 148–49, 158 (Sept. 18–22)
*kaleh*, castle
Kaleh Boinu, **22–24**, 25, 41, 156 (July 24–25)
Kaleh Hissar, *see* Kara Hissar
Kalejik, 77
Kalüg Özü, 17
Kandlija, 3–4, 93, **95,** 158 (Sept. 16–18)
*kara*, black
Karabogha Dagh, 138
Karaburun, 157 (Sept. 5)
Kara Chai, 156 (Aug. 21)
Kara Dagh, 123
Kara Deniz, *see* Black Sea
Karafakeli (Fakeli), 77, 79, 96, 158 (Sept. 18)
Karagedik (near Bahla), 142, 157 (Sept. 3)
Karagedik (near Yerköi), 158 (Sept. 12)
Kara Hissar (Kaleh Hissar), 23, 41, 98–99, **106–12,** 156 (Aug. 20), Pl. VIII
Kara Hüyük, *see* Kül Tepe (NE. of Kaisariyeh), *also* 2
*karajerli*, blackish
Karajerli Su (Kara Su), 4, 53, 77, 79, 86–89, 93, 95–96, 149, 153
Kara Kaya, 155 (July 18), 157 (Sept. 6)
Karamut, 29, **34–35**
Kara Samsun (Amisus), 29, 156 (July 31)
Kara Sengir Dagh, 137
Karasenir, 93, 158 (Sept. 14 and 16–18)
Kara Shehir, 157 (Sept. 11)
Kara Su, *see* Karajerli Su
Karaveli, 155 (July 18)
Karayap, 155 (July 18–19)
*kartal*, eagle
Kartal, *see* Bahla
Kastamuni, 122
Kaushut, 25, 41, 156 (Aug. 21)
Kavak, 28, 156 (July 28, Aug. 7)
Kavass Maghara, 51, 149, **150,** 151, **152,** 154, 157 (Sept. 10)
Kavurüalli, 157 (Aug. 22)
*kaya*, rock
Kazushak, 158 (Sept. 14)
*kechi*, goat
Kechi Kalessi, 151, 157 (Sept. 10)
Kelkid Irmak, *see* Germili Su
Kepen, 55, **56–58,** 155 (July 6)
Kerasund, 77
Kerkenes Dagh, 2, **18–19,** 20, 155 (July 19)
Kerma, Sudan, 67
*kerpich*, mud brick
Kesik Köprü, 157 (Sept. 5)
*keskin*, keen, sharp-edged
Keskin (Denek Maden), 17, 43, 75, 78–79, 155 (July 14–15), 157 (Aug. 23–24)
Keskin Chai, 60, 68, 75
Keskin Sivrissi, 15, 43, 65, 68–75, 155 (July 13)
*khas*, goose
Khas, 51, 148, 157 (Sept. 8)
Khawsa, 28, 33, 156 (July 28, Aug. 7–8)
Kiepert, R., 2, 14, 49, 62, 80–81, 139, 149
Kilinj Özü, 79
Kiran Küshlar, 156 (Aug. 21)
*kirik*, broken
Kirik Kaleh (Eccobriga), 15, 43, 60–66, 68, 75, 155 (July 12–14), 157 (Aug. 22–24), Pl. VI
Kirshehir, 50, 79, 137–38, **145,** 147–49, 151, 157 (Sept. 6–8)
Kochakli, 79
Koch Tashak, 108
Köhne, **15,** 18, 69, 155 (July 18)
*köi*, village
*köprü*, bridge
Köprü Köi, 17, 43, 50, 79, 137–39, 142, 144, 157 (Aug. 23–24, Sept. 5–6)
Koerte, A., 8
Kohl, H., 1, 102
*konak*, mansion; home
Konak Su, *see* Delidje-Konak Su
Konia (Iconium), 158 (Sept. 24)
Korchullu, 156 (Aug. 21)
Krencker, D., 1, 102
*Kry*, statuette of, 66
*küchük*, small
Küchük Nefez Köi (Nefessi), 158 (Sept. 11)
Küi Helleji, 157 (Aug. 22)
*kül*, ashes
Külijli Su, 138, 147, 149
Kül Tepe (NE. of Kaisariyeh; Kara Hüyük), 4, **52,** 53, 55, 61, 86, 97, 158 (Sept. 20)

Kül Tepe (W. of Kaisariyeh), 4
Külüjlar, 14, 155 (July 12)
*küshlar*, armory; winter quarters
*küzül*, red
Küzül Irmak (Halys River), 1, 14–15, 25–26, 41, 43, **48**, 60, **61**, 68, 75, 77–79, 96, 120, 122, 137–38, 142, 144, 149, 154
Küzül Sarai, 7
Küzül Tepe, 82, 149
Kula, 26, 77
Kuntshaltak, 156 (July 25)
Kurgali, 79
Kurun Köi, 156 (Aug. 8)
Kushshar, *see* Giaur Kalessi
Kuzaji, 93, 158 (Sept. 15–16)
Kybele, 59

Ladik, 33–34, **38–39**, 156 (Aug. 8)
Lala Han, 12, **13**, 155 (July 12)
Lamunia, *see* Boz Hüyük
Lange, H. O., 66
Leonhard, R., 74, 128, 130
Lieblein, J., 67

Macridy Bey, Th., 1, 31, 98
*maden*, ore; silver
Maden, *see* Ak Dagh Maden
*maghara* (>*mara*), cave
Magli Göl (Saif Göl), 149–50
Mali Köi, 9, **10**, 155 (July 7)
Malkanjik, 158 (Sept. 18)
Malya Chölü, 50–51, 78, 81, 149, 151
*mara* (<*maghara*), cave
Margolis, Mr., 5
Mariette, A., 66
Mehemedli, 142, 157 (Sept. 3)
Mejidiyeh (Boyalik), 51, 81, 151, 157 (Sept. 8)
Mengen, 157 (Sept. 11)
Merzivan, 28, 41, 122, 156 (July 28, Aug. 17)
Mesopotamia, 1–2
Meyer, Ed., 4, 98, 111
Mithradates, 132
Mohammedan: cemetery, 82; holy places, 79, 85; tombs, 69
Moore, L., 5
Mudania, 7, 155 (July 1), 159
Mülk, 9, 155 (July 7)
Mycenaean culture, 32

Nebhepetre, 66
Nedjati Bey, 5
Nedjmeddin Kadry Bey, 5
Nefessi, *see* Küchük Nefez Köi
Nefez Köi, *see* Büyük Nefez Köi
Neolithic pottery, 3
New York: Metropolitan Museum of Art, 67
Nigdeh, **52**, 53, 158 (Sept. 22–23)
Niksar, 36–37, **44**, 128, 156 (Aug. 11), Pl. V A

*öküz*, bull or cow
Öküzli Hissar (Tyana), 53, 86, 158 (Sept. 23)
*ören*, ruin
*özü*, valley; stream
*oghlu* (>*olu*), son
Olas, 41, 156 (Aug. 15)
*olu* (<*oghlu*), son
*orta*, middle
Orta Hüyük, 88, 97
Osiris, 66
Osmanjik, 28, 41, 77, 120–22, 156 (July 27), Pl. XXIII A
Osmanli (Ottoman): fortification, 55; mosques, 8, 82
Osten, H. H. von der, 66–67
Osten, Mrs. H. H. von der, 5
Ottoman, *see* Osmanli
*ova*, valley; plain
Ova Chai, 137
Oyaja, 142, 157 (Sept. 3)

Palach, 29
Palestine, 67
Paphlagonia, 74, 134
Pasha Chiftlik, *see* Amakzis
Pasha Dagh, 50, 137–38
Pasha Köi, 87–88, 158 (Sept. 15)
Pazard Köi, 38, **45**, 156 (Aug. 12)
Perrot, G., 1, 8, 98, 111, 142
Philippson, map maker, 2
Phrygia, 99, 128
Phrygian: altar, 59, 99, **109–11**, Pl. VIII; basreliefs, 12, 139; inscriptions, 98–99, Pl. VII
"Phrygian necropolis," 49, 157 (Aug. 28)
Phrygians, 2
Pirlek Su, 9
Pörenk, 155 (July 18)
Polatli, 9, 155 (July 7)
Pompey, 132
Pontic king, 132
"Pontic" oil press, **21**, 23
Porya, 9, 155 (July 4)
pre-Greek: mounds, 3; settlements, 2
pre-Mohammedan burials, 64
Puchstein, O., 1, 8, 98, 102, 111
Pursak Su, 9

Ramsay, W. M., 62
Ranke, H., 67
Reouff Bey, 65
Roman: architectural fragments, 8, 20, 82, 142; bridge, 82, **84**; glazes, 43; milestone, 144; pottery, 26, 82; remains, 9, 27, 33; roads, 85, 109; settlement, 139; site, 56, **58**; Tavium, 108; *thermae*, **16,** 18; walls, 87, 144
Royal Geographical Society, 62

Saif Göl, *see* Magli Göl
Sakaria River, 9, 55
Samsun, 5, 24, 28–29, **30,** 31–33, **36,** 100, 156 (July 28–Aug. 7), 159
*sarai*, palace
Sarai (near Chorum), 27, 156 (July 26)
Sarai (near Yozgad), 82, **85,** 155 (July 17)
Sarai Su (Bozuk Chai), 18, 77, 79–80, 82, 84, 138, 158 (Sept. 13)
*sari*, yellow, pale
Sari Ören, 87–88, **90,** 158 (Sept. 15)
Sarim Bey, 157 (Aug. 22)
Saruluk Dagh, 123
Saush, 95
Schäfer, H., 66
Schede, M., 5, 49
Sebastia, *see* Sivas
Sekili Köprü, 17, 80, 155 (July 15)
Seljuk: building ruins, 99; castle, 120; coins, 26; *hans*, 17, 38; lions, 56, 84, 144; pottery, 3; *türbeh*, 37
Sevdigin Hüyük, **146,** 147, 157 (Sept. 7)
Shakh Muratli (Alizi), 20, 155 (July 19)
Shedid Hüyük, 143, **144,** 157 (Sept. 5)
Shefatli, *see* Hadji Shefatli
Shefket Hilmi Bey, 5
*shehir*, city
Shekh Shamil, 157 (Aug. 22)
Sinuhe, Tale of, 67
Sitsnefru, 67
Sivas (Sebastia), 5, 28, 77
*sivri*, peak
Sivri Hissar (Justinianopolis), 9, 55–56, 155 (July 5–7)
Sofular, 147, 157 (Sept. 6)
Sofular Hüyük, **142,** 143, 148, 157 (Sept. 5)
Sonyud, 156 (Aug. 12)
Sorgun Boyu, 7
Stambul (Constantinople, Istanbul), 1, 5, 7, 53, 86, 155 (July 1), 158 (Sept. 25)
Stambulolu, 86, 158 (Sept. 12 and 14–15)
Strabo, 74
*su*, water, river
Sudan, 67
Sungur, 14
Sungurlu, **22,** 25, 41, 156 (July 24, Aug. 21)
Suyu Güzel, **141,** 142, 148 ,157 (Sept. 5)
Syria, North, 1, 3

Tabakshaneh Su, 12, 137
Tachirolu, 93
*takhta*, wood
Takhta Kaleh, 49, 157 (Sept. 1)
Talas, 158 (Sept. 21)
Tambassan, 106, 108, **116,** 156 (July 23)
*tash*, stone
*tashan* and *taushan*, rabbit
Tashan Kaleh, 149, 153–54, 158 (Sept. 15)
Tavium, *see* Büyük Nefez Köi
Temlik, 89, 91, 93, **94,** 158 (Sept. 14)
*tepe*, (artificial) hill
Terzili, 18, 79, 155 (July 18)
Terzili Hammam, **16–17,** 18, 155 (July 18–19), Pl. I
Thutmose I, king of Egypt, 67
Tiryns, Greece, 31
Tokat, 35–36, 38, 41, 126, 128, 156 (Aug. 8–12)
Tokat Su, 126
Tosun Burun, 157 (Sept. 8)
Tozde Köi, 80
*türbeh*, (Mohammedan) tomb shrine
Turk, 5; Turks, 149
Turkhal, 35, 38–40, **45,** 128, 130, 156 (Aug. 8 and 12–13)
Turkish: cemeteries, 43; engineers, 93; government, 12; *hammam*, 85, **87**; inscriptions, 59; maps, 2
Tuvush, 41
*tuz*, salt
Tuz Chölü, 137
Tyana, *see* Öküzli Hissar

*üch*, three
Üchayak, 50, **51,** 157 (Sept. 8)
Üchleri, 157 (Sept. 8)
Ürgüb, 77, 154
Ughur Kaleh, 79
*ulu*, large
Uluküshlar, 5, 53, 158 (Sept. 23–24), 159
Upwawet, Egyptian god, 66
Urumgush, 157 (Sept. 3)
Utahkanlar, 156 (Aug. 7)
*uyuz*, itch, mange
Uyuz Hammam, 84, **86,** 157 (Sept. 11), 158 (Sept. 13)

*vali*, governor
Vichy, France, 28
*vilayet*, province; provincial capital
Vorderasiatisch-ägyptische Gesellschaft, 1, 31, 98

Weigand, Paul, 5, 46, 51, 79, 109, 138
Winlock, H. E., 67
Woolley, C. L., 4
Würzburg, Germany, University of, 79

*yakhshi* (Old Turkish), beautiful
Yakhshi Han, 15, 43, 60, **61,** 68, 75, 79, 137, 155 (July 12)
Yamuklar, 109, 157 (Sept. 11)
*yarüm*, half
Yarüm Kaleh, 51, 149, **150,** 151, 153, 157 (Sept. 8)
*yazili*, inscribed
Yazili Kaya, 25, 98, 109, 112, **118–19,** 156 (July 22), Pls. X–XXII
Yazili Tash, **17,** 18, 155 (July 19)
Yerköi, 17–18, 46, 50–51, 76–81, 84, 86, 109, 149, 151, 155 (July 15 and 17), 157 (Sept. 8–14), 159
*yeshil*, green
Yeshil Irmak, 21, 27, 34–35, 38, 77, 124
Yeshillü, 157 (Aug. 22)
Yozgad (Bozuk), 1, 17–18, 20, 63, 69, 76–79, 82, **85,** 87, 98, 138, 155 (July 15–20)
Yükbash, 102

Zara, 156 (Aug. 15)
Zaramba, 151
Zela Han, 155 (July 12)
Zia Bey, 25
Zileh, 39–40, **46,** 128, 156 (Aug. 13)
Zinjidereh, 158 (Sept. 21)

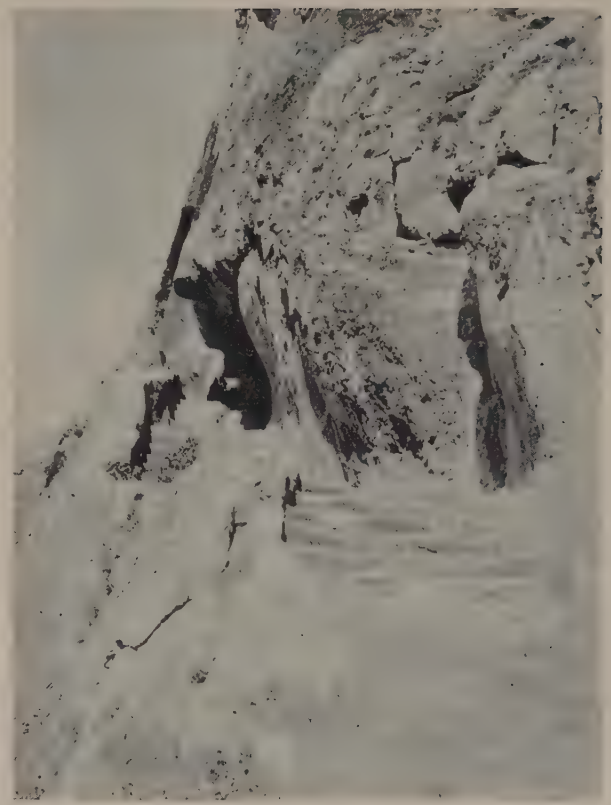
[PRINTED IN U.S.A.]

GLASGOW UNIVERSITY LIBRARY:

PLATE I

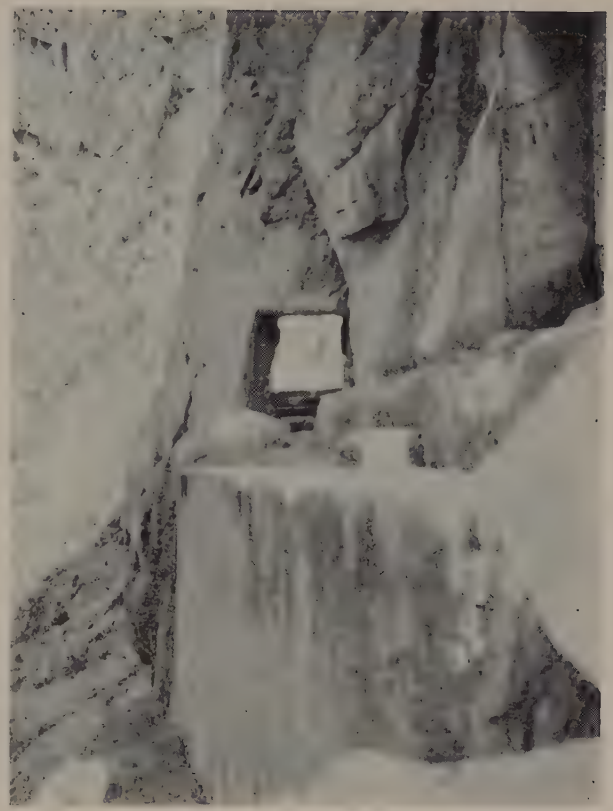
Terzili Hammam

PLATE II A AND B



AMASIA. CLIFF TOMBS

PLATE III A AND B



Amasia. Cliff Tombs

PLATE IV A AND B

Comana Pontica. The Monolith

PLATE V A

Ancient Reliefs Built into a Modern Wall near Niksar

PLATE V B

Faharet Chesme

PLATE VI A AND B

The Egyptian Statuette Found at Kirik Kaleh

PLATE VII

Hüyük. Lion with Phrygian Inscription

PLATE VIII

Kara Hissar. The Phrygian Altar

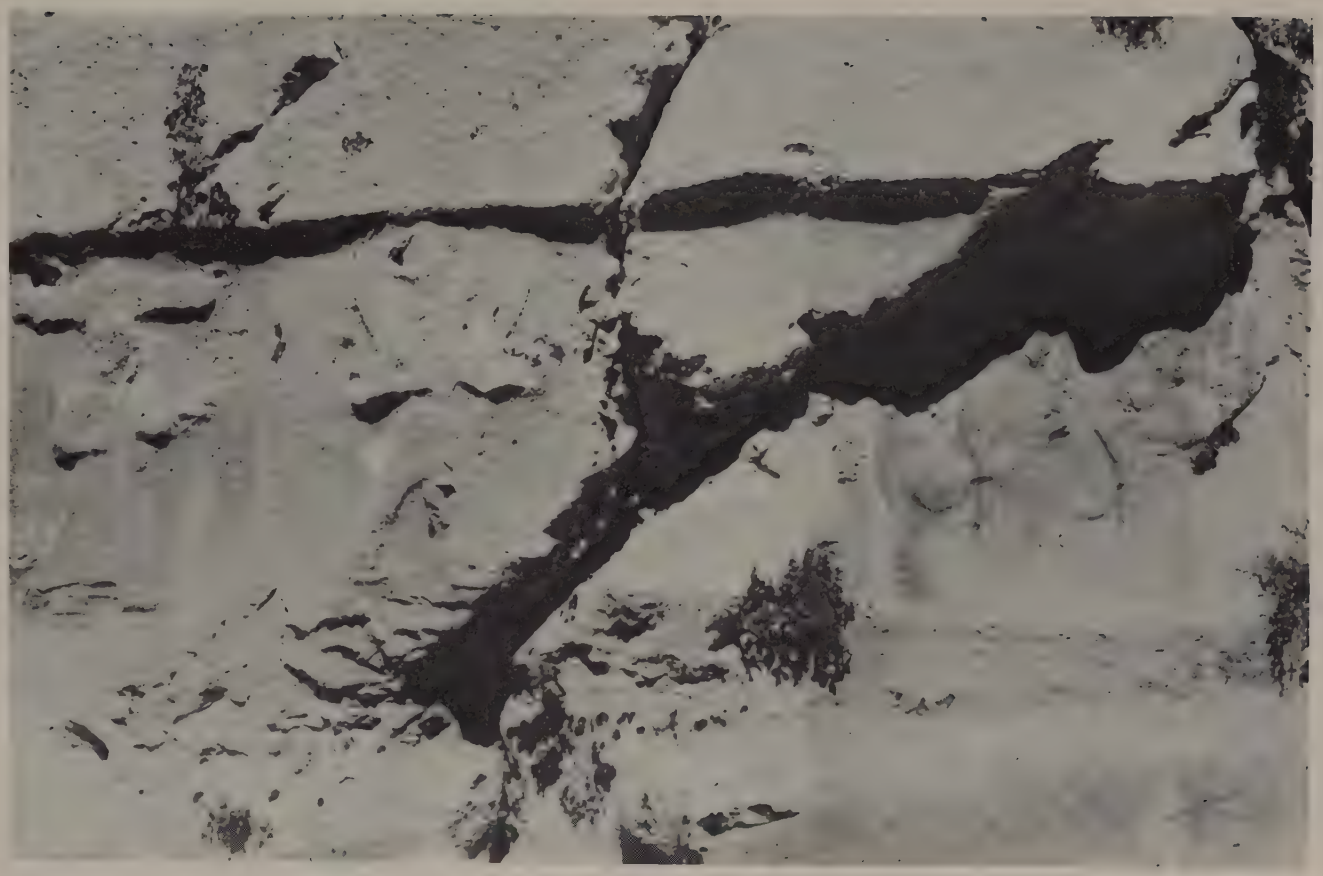
PLATE IX

Büyük Nefez Köi. Classical Sculpture

YAZILI KAYA. THE SCULPTURES. FIGURES 1–25

YAZILI KAYA. THE SCULPTURES. FIGURES 1–15 AND 9–25

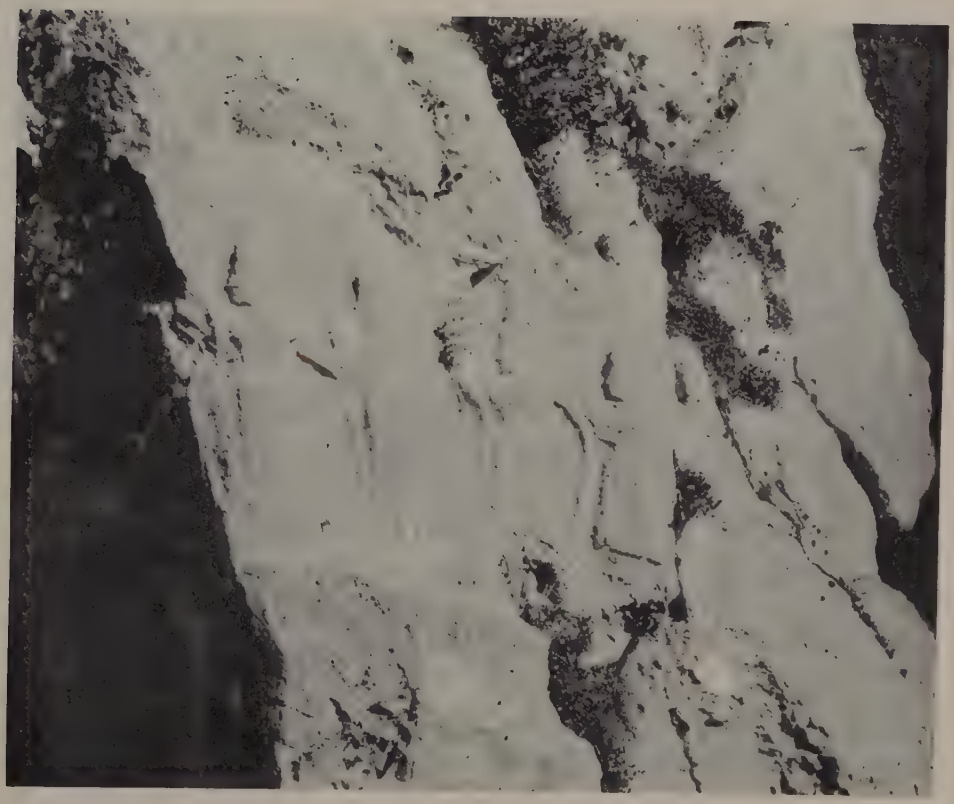
YAZILI KAYA. THE SCULPTURES. FIGURES 17–25 (WITH 1–10 AT LEFT) AND 26–34 (33–34 IN SHADOW)



YAZILI KAYA. THE SCULPTURES. FIGURES 35-38

YAZILI KAYA. THE SCULPTURES. FIGURES 39–41 (IN A) AND 42–47 WITH 51–56 (IN B; 46–47 IN DEEP SHADOW, 51–56 IN LIGHTER SHADOW)

YAZILI KAYA. THE SCULPTURES. FIGURES 42–47



YAZILI KAYA. THE SCULPTURES. FIGURES 52–56 AND 58–63

Yazili Kaya The Sculptures. Figure 65

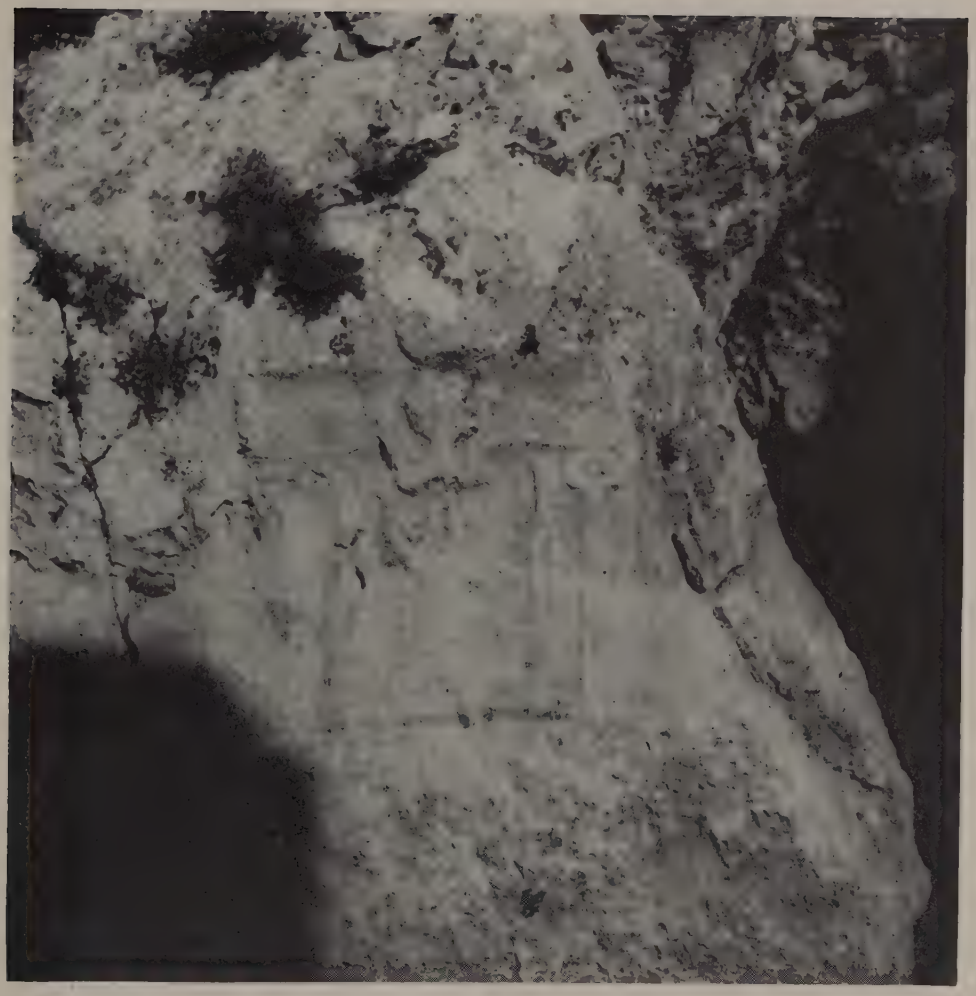
PLATE XVIII A AND B

YAZILI KAYA. THE RIFT, WITH FIGURE 66 FIRST IN ITS SETTING, THEN SEPARATELY

YAZILI KAYA. THE SCULPTURES. FIGURE 67 BESIDE RIFT; FIGURES 68–78 AND NICHES, AS SEEN IN LOOKING SOUTHWARD THROUGH INNER COURT

YAZILI KAYA. THE SCULPTURES. FIGURES 68–79

PLATE XXI



Yazili Kaya. The Sculptures. Figure 80

YAZILI KAYA THE SCULPTURES. FIGURES 81–82

PLATE XXIII A

Osmanjik. Peacock Relief

PLATE XXIII B

Amakzis. Lion Relief

PLATE XXIV

Giaur Kalessi. The Newly Discovered Relief

WITHDRAWN
UNIVERSITY LIBRARY

UNIVERSITY
LIBRARY
WITHDRAWN